

B.V. RAJU COLLEGE :: VISHNUPUR
6.3.3

2016-17

SCIENTIFIC & EDUCATIONAL PRACTICES(SEP)

Venue : VEDIC, AZIZ NAGAR, Moinabad Mandal, Ranga Reddy District, Telangana State

Facilitator: Dr. Lakshmi

SNO	Dates (from-to) (DD-MM-YYYY)	Title of the professional development program organized for teaching staff	No. of Participants
1	DEC 7-9, 2016	Scientific & Educational Practices(SEP)	1
2	DEC 12-14, 2016	Scientific & Educational Practices(SEP)	4
3	FEB 16-18, 2017	Scientific & Educational Practices(SEP)	6
4	Feb 27-Mar 1, 2017	S.E.P. train the trainer	1
5	APR 6-8, 2017	Scientific & Educational Practices(SEP)	3

1. Scientific & Educational Practices(SEP)
DEC 7-9, 2016

Sno	Name of the Faculty	Designation
1	Ms. P. Vanitha	Lecturer in Computer Science

2. Scientific & Educational Practices(SEP)
DEC 12-14, 2016

Sno	Name of the Faculty	Designation
1	Ms. P. Manjulatha	Lecturer in Physics
2	Ms.V. Prasanna Bhavani	Lecturer in Physics
3	Mr. Y. Kiran Kumar	Lecturer in Physics

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3. Scientific & Educational Practices(SEP)

FEB 16-18, 2017

Sno	Name of the Faculty	Designation
1	Ms.K L Malleswari	Lecturer in Chemistry
2	Ms.P Madhura Subhasini	Lecturer in Mathematics
3	Ms.D Sri Devi	Lecturer in Life Sciences
4	Ms.R Prameela	Lecturer in Commerce
5	Ms. D. Roja Rani	Asst. Professor, MCA Dept.
6	Ms. A Bhanu Priya	Asst. Professor, MCA Dept.

4. S.E.P. train the trainer

Feb 27-Mar 1, 2017

Sno	Name of the Faculty	Designation
1	Mr. B.Kiran	HOD, Physics & Electronics

5. Scientific & Educational Practices(SEP)

APR 6-8, 2017

Sno	Name of the Faculty	Designation
1	Dr. N. Prudhvi Raju	Lecturer in Chemistry
2	Mr. K. Pavan Kumar	Lecturer in Statistics
3	Mr. B.S. Seshagiri Rao	Lecturer in Electronics

Workshop on Scientific Educational Practices

(Organized for faculty members of the Institutions under Sri Vishnu Educational Society)

Proceedings



Organized & Conducted by

Vishnu Educational Development & Innovation Centre

VEDIC

Hyderabad, Telangana, India

April 6th to 8th 2017

Proceedings of the Workshop on Scientific Educational Practices, April 6th to 8th 2017



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April 6th to 8th 2017

Facilitator(s)



Lakshmi D (Facilitator)

Research Officer, Vishnu Educational Development & Innovation Centre (VEDIC), Hyderabad

email : lakshmi.d@srivishnu.edu.in, lakshmi.lifefordivine@gmail.com

Phone : 91-9945379089, 9965927772

R. Guru Swamy, Associate Professor, EEE, BVRIT-H, guruswamy.r@bvrithyderabad.edu.in



Workshop on Scientific Educational Practices

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Participants

No	Name	Department	Institution	Email	Contact Number
1	Mr. P. Devi Kiran	EEE	SVECW	devikiran@svecw.edu.in	9441114765
2	Mr. N. Praveen Kumar	EEE	SVECW	praveenkumar.nalli@svecw.edu.in	9441170567
3	Mr. E. Naga Raju	EEE	SVECW	nagaraju.eluri@svecw.edu.in	9550833487
4	Mr. A.S. Mohan Raju	ECE	SVECW	surendra@svecw.edu.in	9032825483
5	Ms. Ch. Jaya	ECE	SVECW	jaya.chinni25@gmail.com	7396125233
6	Ms. G. Vijaya Kumari	CSE	SVECW	gvijayakumari8@gmail.com	8143551792
7	Mrs. N. Silpa	CSE	SVECW	nsilpa@svecw.edu.in	9849776869
8	Ms. Ch. Lalitha Syama Sundari	CSE	SVECW	lalithachandra21@gmail.com	9494491733
9	Ms. M. Dhana Lakshmi	CSE	SVECW	laxmireddy.dhana@gmail.com	9491968368
10	Mr. J. Venkata Rao	IT	SVECW	venkatarao.jonnadula@svecw.edu.in	9502454654
11	Mr. S. Ravichandra	IT	SVECW	ravichandrasriram@svecw.edu.in	9618252445
12	Ms. V. Haritha	CE	SVECW	harithacivil@svecw.edu.in	9948368687
13	Mr. N. Prudhvi Raju	Chemistry	BVRICE	Prudhvi115@gmail.com	9912881081
14	Mr. B.S. Seshagiri Rao	Electronics	BVRICE	bssrao2011@gmail.com	9492741372
15	Mr. K. Pavan Kumar	statatics	BVRICE	Pavan.kadkatla@gmail.com	9440412375
16	Mr. G. Mahesh	ME	VIT	gummadi14@gmail.com	9542687816
17	Mr. K. Rajendra	ME	VIT	sri.rajendra3@gmail.com	8008287177
18	Ms. M. Gouthama Kranthi	ME	VIT	mgkranthi.me@gmail.com	9441551583

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19	Ms. K. Jaya Kumari	BS&H	VIT	jayakumarikoya562@gmail.com	9948764853
20	Ms. S. Sailaja	BS&H	VIT	sailu5041@gmail.com	9581232767
21	Ms. P. Raja Rajeswari	BS&H	VIT	prajipranathi@gmail.com	9000062368
22	Mr. K. Nani Babu	BS&H	VIT	nani462@gmail.com	8019180893
23	Ms.V.SAILEELA	MECH	BVRITH	saileela.v@bvrithyderabad.edu.in	8886812956
24	Ms.A.RAMYA	MECH	BVRITH	ramya.a@bvrithyderabad.edu.in	9640125266
25	Ms.V.MALATHI	BS&H	BVRITH	malathi.v@bvrithyderabad.edu.in	9666350035
26	Mr.M.GOPIKRISHNA	MECH	BVRITH	gopikrishna.m@bvrithyderabad.edu.in	9440529336
27	Mr.A.SAMPATH Kumar	BS&H	BVRITH	sampathkumar.a@bvrithyderabad.edu.in	9963977802



Workshop on Scientific Educational Practices

(Organized for faculty members of the Institutions under Sri Vishnu Educational Society)
April 6th to 8th 2017

Contents

- 1 Programme Schedule
- 2 Presentations
 - 2.1 Brain and Learning, Coexistence, Cooperation
 - 2.2 Learning and its Components, Qualities of Teachers
 - 2.3 Memory & Intelligence, Knowledge Construction
 - 2.4 Thoughts, Learning, Intelligence, Personality
 - 2.5 Pedagogy and its Components, Theories in Learning
 - 2.6 Active Learning, Learning Outcomes
 - 2.7 Curricula Analyzing and Planning, Creating Learning Evaluation
 - 2.8 Cone of Learning, Instructional System Design
 - 2.9 Pillars to Succeed
- 3 Feedback



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April 6th to 8th 2017

Schedule

Day – 1		
Time	Session	Outcome
09.00 am - 09.05 am	Inauguration	
09.05 am - 10.30 am	Brain and Learning Coexistence, Cooperation	Identify how brain learns and how we socialize
10.30 am - 10.45 am	Tea	
10.45 am - 12.30 pm	Learning and its Components Qualities of Teachers	Elements involved in the learning process and how teachers build quality
12.30 pm - 01.15 pm	Lunch	
01.15 pm - 02.45 pm	Memory & Intelligence Knowledge Construction	Identify how knowledge gets constructed and converts into intelligence
02.45 pm - 03.00 pm	Tea	
03.00 pm - 05.00 pm	Thoughts, Learning, Intelligence, Personality	Identify our Thoughts, Learning Styles, Intelligences and Personality
Day – 2		
09.00 am - 10.30 am	Pedagogy & its Components Theories in Learning	List the educational theories and its components
10.30 am - 10.45 am	Tea	
10.45 am - 12.30 pm	Active Learning Learning Outcomes	Identify how learning outcomes can be achieved through active modes
12.30 am - 01.15 pm	Lunch	
01.15 pm - 02.45 pm	Curricula Analyzing & Planning Creating Learning Evaluation	Analyze elements in curricula and to construct a learning plan
02.45 pm - 03.00 pm	Tea	
03.00 pm - 05.00 pm	Cone of Learning Instructional System Design	Recognize the learning retention techniques and instructional design
Day – 3		
09.00 am - 10.30 am	Learning Demonstrations Reflective Thinking for Teaching	Demonstrate teaching incorporating pedagogical aspects
10.30 am - 10.45 am	Tea	
10.45 am - 12.30 pm	Learning Demonstrations Reflective Thinking for Teaching	Demonstrate teaching incorporating pedagogical aspects
12.30 am - 01.15 pm	Lunch	
01.15 pm - 02.45 pm	Pillars to Succeed	Identify the pillars that helps us succeed in our career and jobs
02.45 pm - 03.00 pm	Tea	
03.00 pm - 04.30 pm	Personal Achievement Strategies	Visualize from experts the secret to achieve personal success
04.30 pm - 05.30 pm	Valediction	

Workshop on Scientific Educational Practices

1

Can we form teams ?

2

Leading in Education

The Basics

3



Leaders in Education

VEDIC

- Leaders establish *vision* and set direction
- Leaders affirm and articulate *values*
- Leaders have high *standards* and high expectations
- Leaders are *accountable*
- Leaders *motivate*
- Leaders achieve *unity*
- Leaders *involve others* in decision-making
- Leaders serve as *role models*
- Leaders *listen* and explain
- Leaders *represent* the organization
- Leaders *guide* constituents and maintain their support ⁴



Have we cherished teachers in our life ?

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- List those teachers who have changed our life
- Write the reasons as to what change they brought in our life
- Have we ever thanked them for being a change agent in our life ?
- Have we had “horrible teachers” while we were studying ?
- Why is it that all teachers are not change agents in our lives ?

5

Each one of us could write atleast 5 reasons as to

What is our expectation from this workshop ?

What...

When...

Good Teacher





Qualities / Character / Behavior

- Encourage
- Honest
- Dedication
- Friendly
- Self control
- Motivators
- Unbiased
- Pointing mistakes
- Initiators
- Respect for others
- Moral Support
- Dress code
- Humanist
- Confident
- Service minded
- Easily Approachable
- Optimistic
- Hard worker
- Passionate
- Teaching Style
- Helping Tendency
- Good learners
- Forgiving
- Care
- Technical Skills
- All rounder
- Command
- Knowledge

8

Two Dimensional Model of Teachers (Lowman, 1985)

Intellectual Excitement	Interpersonal Rapport			
	Punishing	Low	Medium	High
Low	Inadequate Attacker "	Inadequate	Marginal	Warm Fuzzy
Medium	Adequate Attacker "	Adequate	Masterful Facilitator	Masterful Lecturer
High	Intellectual Attacker "	Competent	Intellectual Authority	Complete Master

How many students will we impact ?

- No. of subjects taught by me every year _____
- No. of students in each of those classes _____
- So in a year, I will be teaching _____ students
- I am _____ years old,
So before retirement I will be teaching _____ students.
- So if I was a “GOOD TEACHER”, I will be the change agent for _____ students lives
- Do you want to be one ?



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Define Teaching & Learning

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“Teaching”

-

“Learning”

-

Define : Teaching

*Teaching includes all activities
to provide education through interaction
so that learners can stand on their own feet*

Define : Learning

*Learning can be defined as a change in behavior
as a result of experience*



What is our Institution's Vision ? VEDIC

(A) BVRIT (Womens)

To emerge as the **best** amongst institutes of technology and research **in the country** dedicated to the cause of promoting **Quality** based technical education

(B) Dr.BVRIT (Narsapur)

To create and nurture **competent** engineers and managers who would be **enterprise** leaders throughout the world with a **sound background** in ethics and societal responsibilities



What is our Institution's Vision ? VEDIC

(C) SVECW (Bhimavaram)

Transform the society through **excellence** in Education, Community **empowerment** and **sustained** Environmental protection

(B) VIT (Bhimavaram)

To **ignite the minds** of the students through academic **excellence** so as to bring about **social transformation** and **prosperity**

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What is our Institution's Mission ? **VEDIC**

BVRIT (Womens)

Empowerment of
women engineers and technocrats
with emphasis on
academic excellence,
life skills and
Human Values

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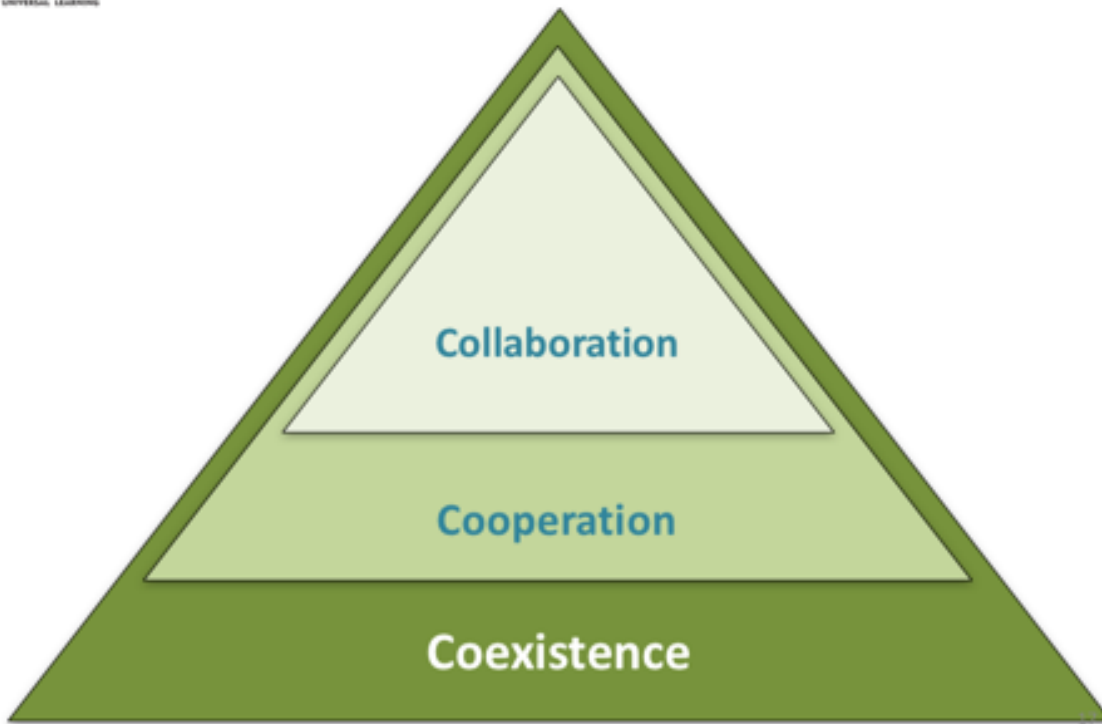
What is our Institution's Quality Policy ?

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// can you please tell..... ???

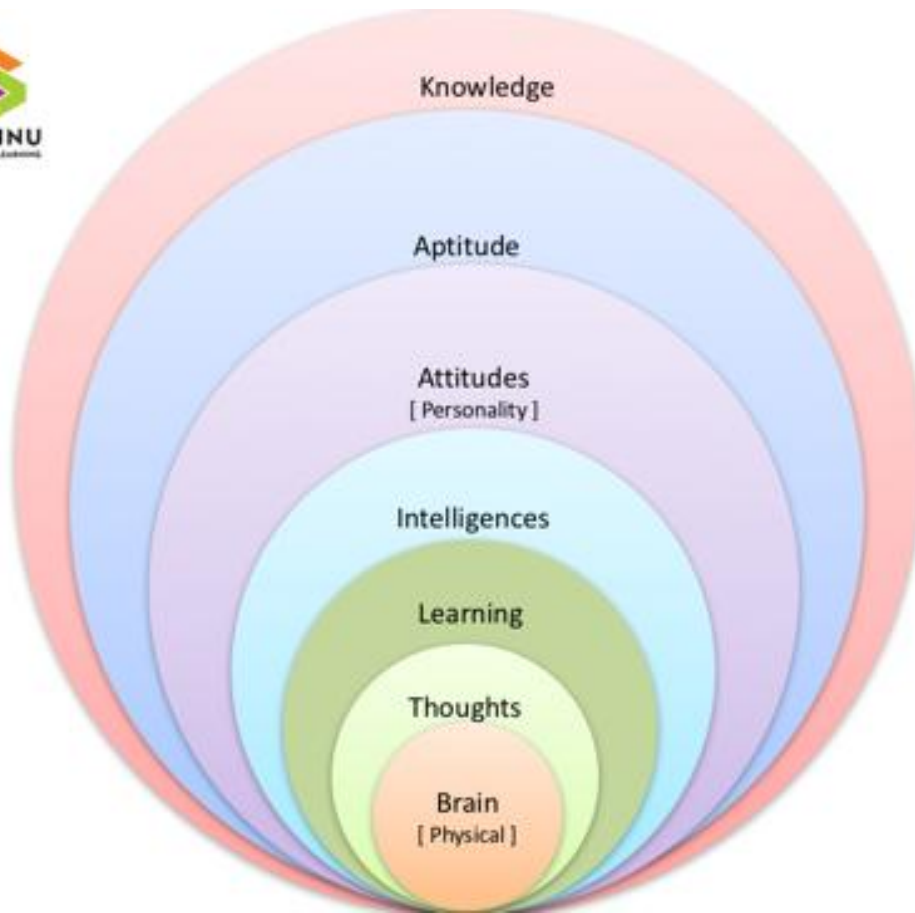
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3 Cs of Life



Why would any human learn
anything at all ?
Where does “Learning” happen ?
Learning happens in the
Brain” !

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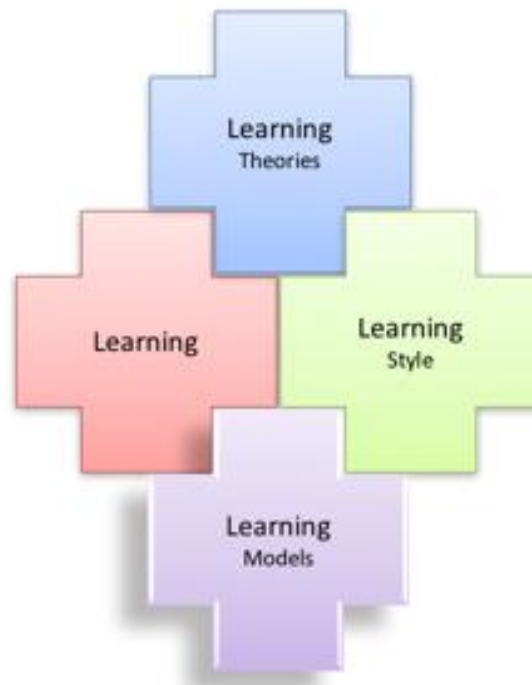




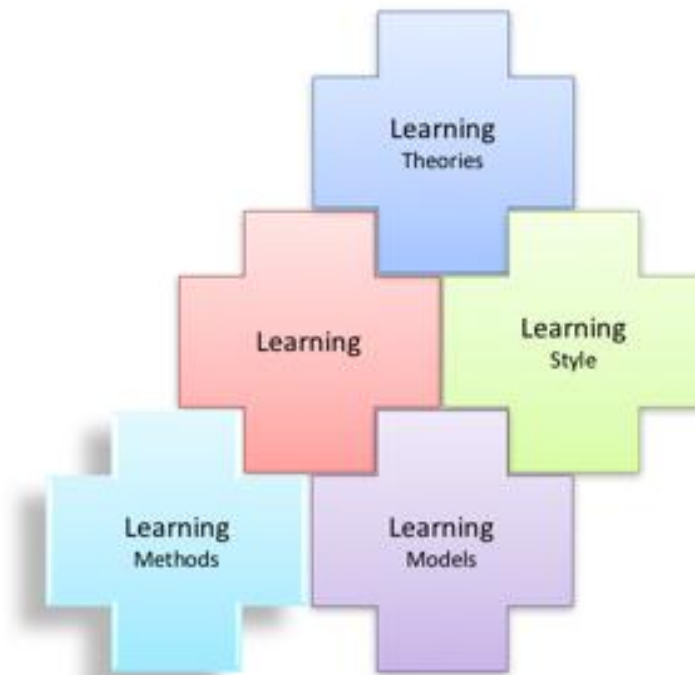
Our Present Position



What Learning Theories are we using ??

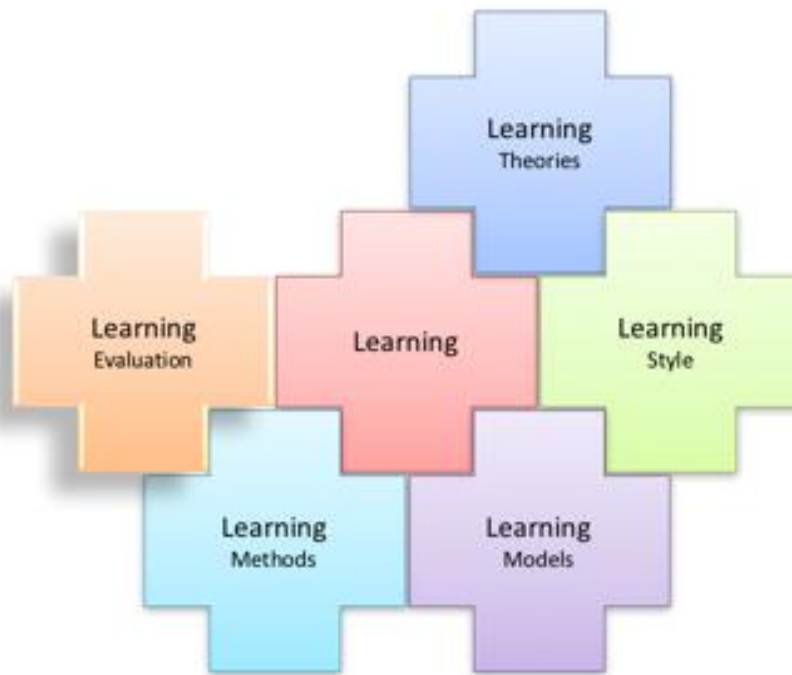


Our Present Position



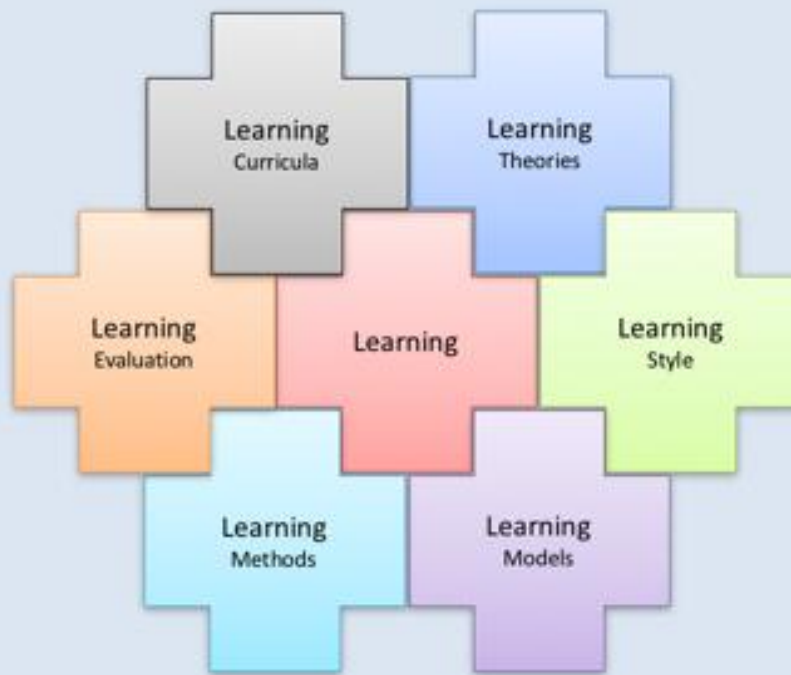
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Our Present Position

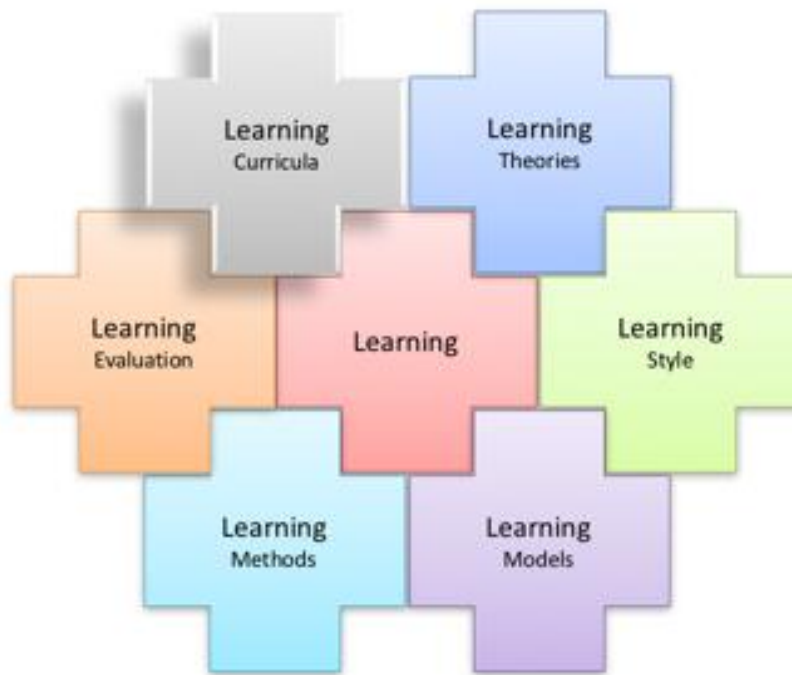


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Our Present Position



Our Present Position



Brain and the Body

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Brain Function :

1. Maintain whole body in an optimal state relative to environment
2. Brain registers stimuli and responds by generating actions

What the Brain does ?

1. The brain receives a constant stream of information as electrical impulses from neurons in the sense organs.
2. The first thing it does is to determine whether the information warrants attention.
3. Brain requires stimulation and connection to survive and thrive.
4. But if it is novel or important, the brain amplifies the signals, causing them to be represented in various regions.
5. If this activity is sustained for long enough, it will result in a conscious experience.
6. In some cases, thoughts are taken one step further, and the brain instructs the body to act on them, by sending signals to the muscles to make them contract

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1. Reading is NOT Learning
2. Copying is NOT Learning

1. Think & Read is PARTIAL Learning

1. Think & Read }
Think & Write } is _____ % Learning

5. Think & Read }
Think & Write } is _____ % Learning
Think & Discuss }

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Rules for Learning

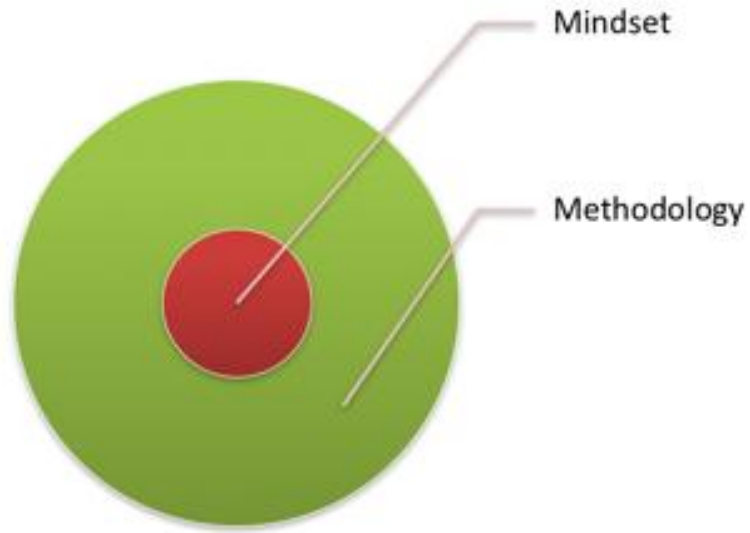
“ Anything that is not THOUGHT
is not learnt at all”

“Anything COPIED is NOT learnt at all”

The content and context



Context : Mindset & Methodology





Let us calculate the

VEDIC

learning workload of a Learner

A. No. of Class periods in a Day (include theory and practical hours)	:
B. Average number of Concepts taught in each of these period	:
C. So Number of Concepts learned by students in a day ($C = A \times B$)	:
D. Avg. Time required to learn ONE concept by the student at home/hostel	:
E. So, Avg. Time a Student studies at home (apart from college hours) ($E = C \times D$)	:

F. Number of Courses in a Semester	:
G. Number of Contact Hours for every Course in a Semester	:
H. So, Number of Concepts learned by the students in a Semester ($H = F \times G \times B$)	:
I. Hence, Avg. Time required by the student to learn all the concepts before (say) the semester final exam ($I = H \times D$)	:



Key features of the Brain (Match the Following)

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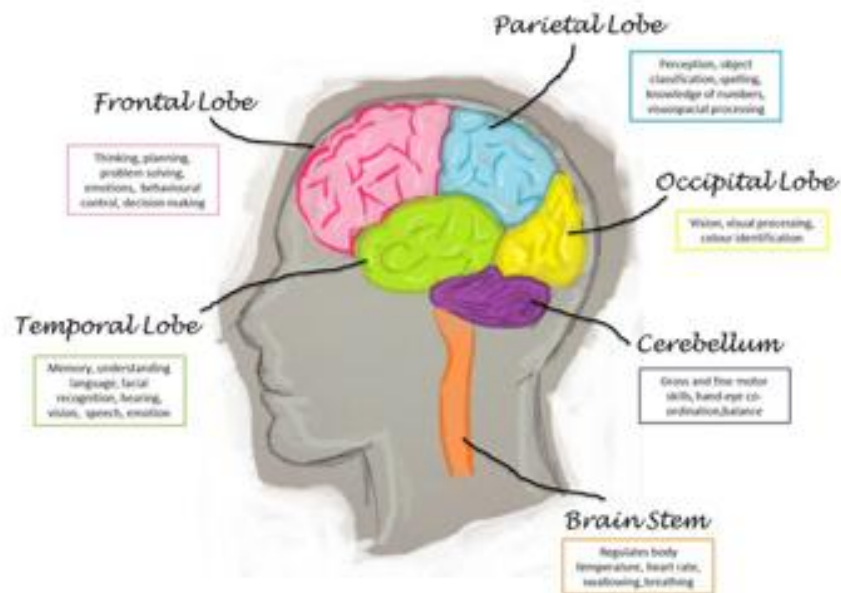
Feature	Description
1. Processing Information	A. Brain consists of approximately 100 billion cells. Signals are electrical, but mode is chemical, and sent through neurotransmitters. Each individual neuron can form thousands of links with other neurons in this way, giving a typical brain well over 100 trillion synapses
2. Sending Signals	B. Brain registers vast amount of information, only a small amount of it is used for processing and we are conscious about that. Unconscious brain processing also initiates actions
3. Modules and Connections	C. Different parts of brain does different things, but are heavily interconnected. Low level functions like registering sensation is localized, but high level function like memory are heavily interconnected between brain areas
4. Individuality	D. Brain tissue can be strengthened like muscle. Brain tissues can grow physically bigger. Making the person more skillful.
5. Elasticity	E. Blueprint of our brain is dictated by genes. Each brain is unique and hence people are unique.

Brain Performs..... Match the features ^{VEDIC}

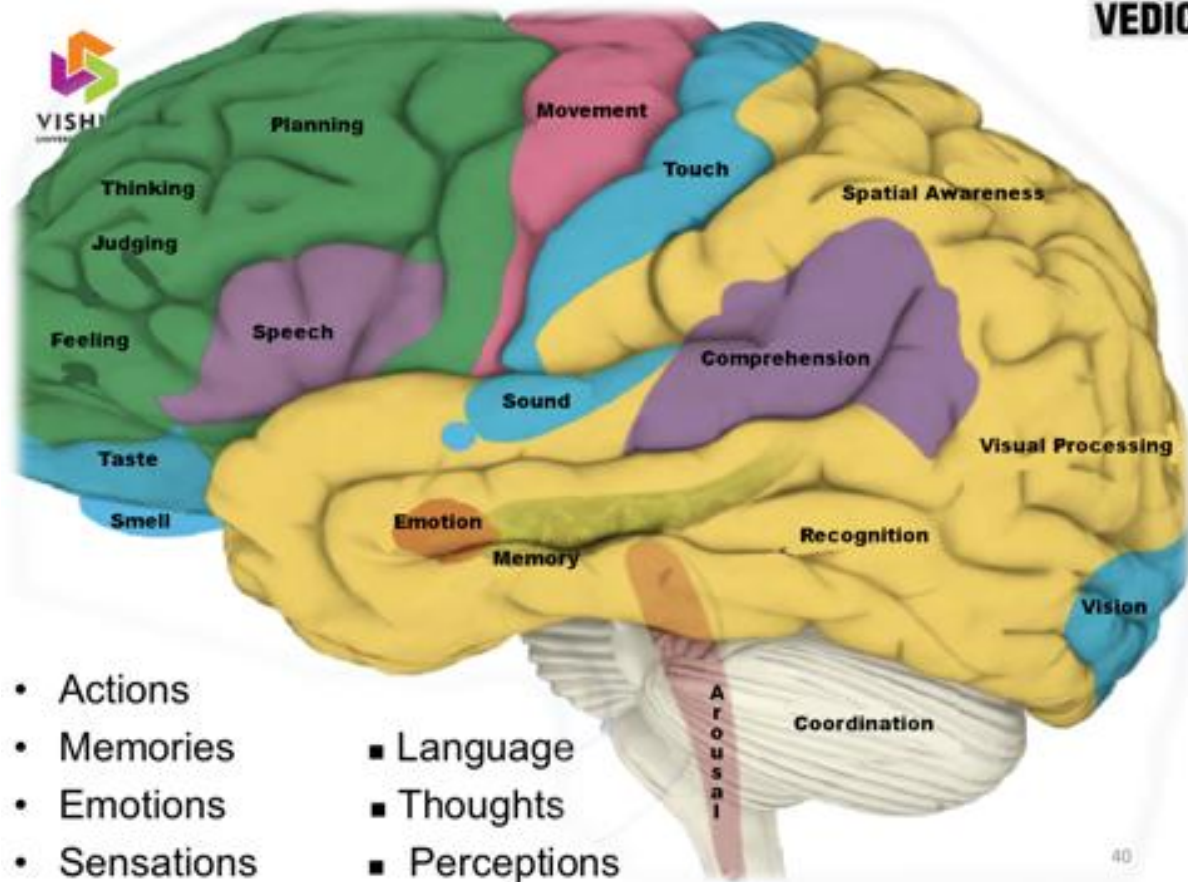
Feature	Description
1. Actions	A. Sensory information from multiple sensors bind together to form multisensory perception
2. Memories	B. Information from environment enters brain through sense organs including internal sensors. When no external stimuli is there, internal stimuli causes thoughts creating imaginations
3. Language	C. Brain uses senses, perceptions, and emotions to generate action plans called thoughts
4. Emotions	D. Certain stimuli causes changes in the body by activating areas in the limbic system (amygdala) and produce feelings
5. Thoughts	E. Brain involves in production of speech and analyzing what others say, Brain has ability to link objects with abstract symbols and convey the symbols to represent a thought or idea
6. Sensations	F. Experiences change the neural activity of brain cells, and help recall those experiences of the past to determine our present actions
7. Perceptions	G. Certain body parts are specialized to produce body movement. Brainstem controls chest, lung, heart, blood pressure, muscle, nerves, limb etc.,

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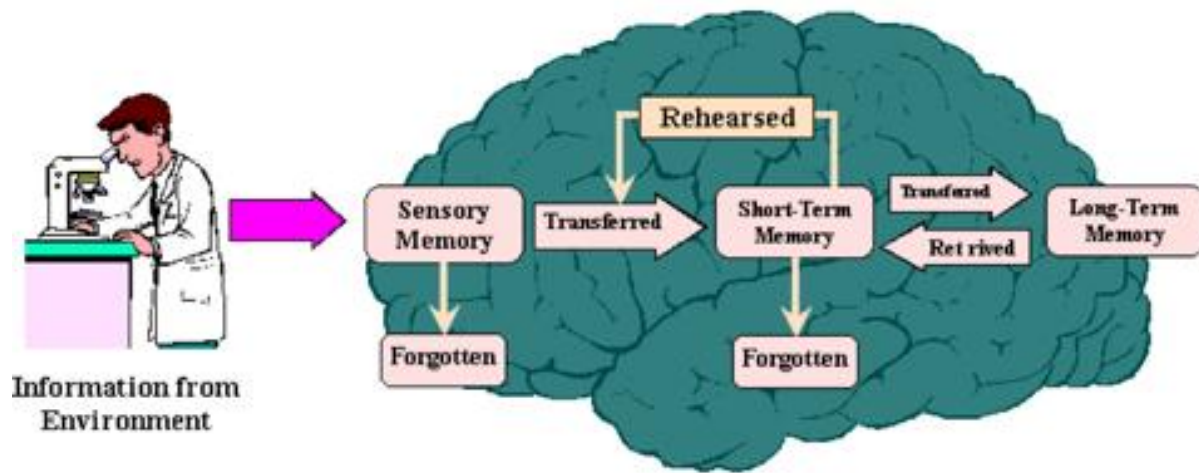
Brain Lobes & Functions



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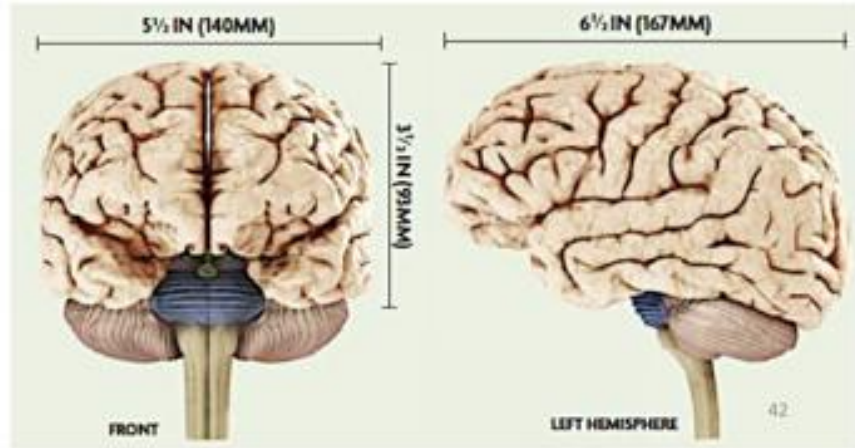
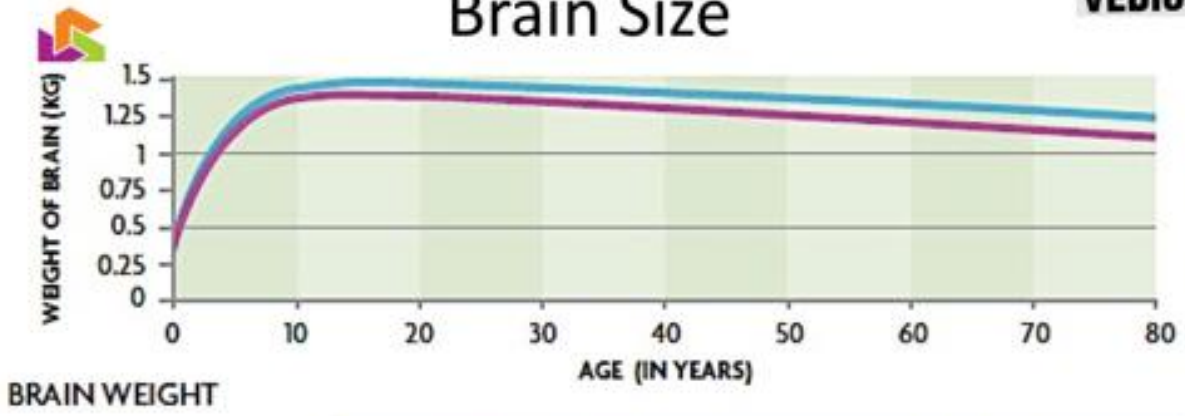
How the Brain Learns



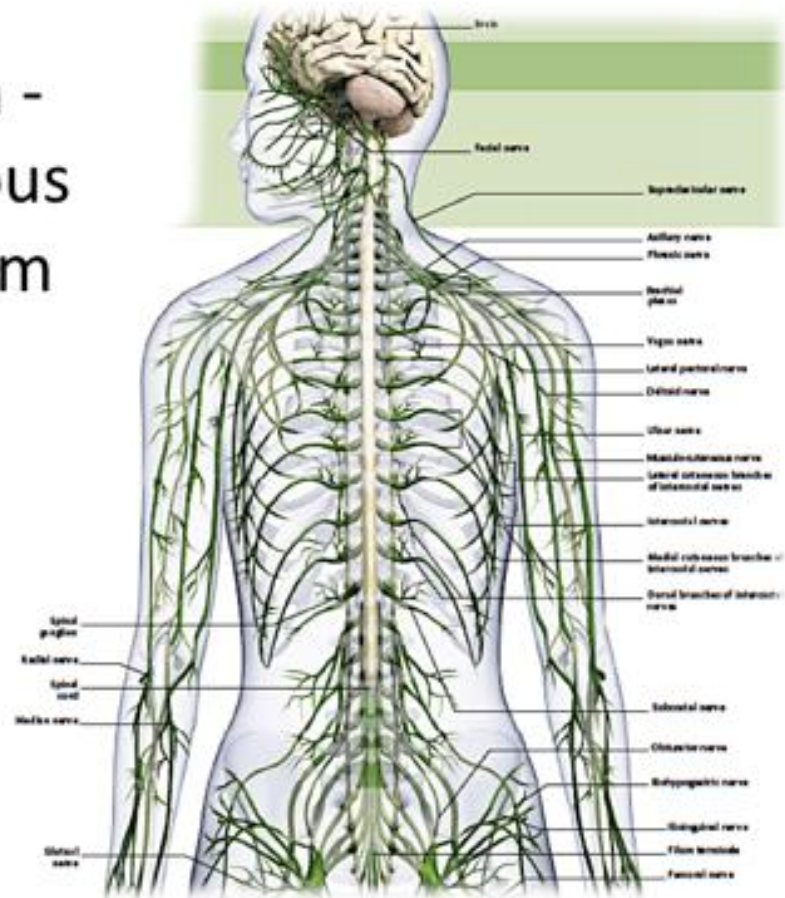
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Brain Size

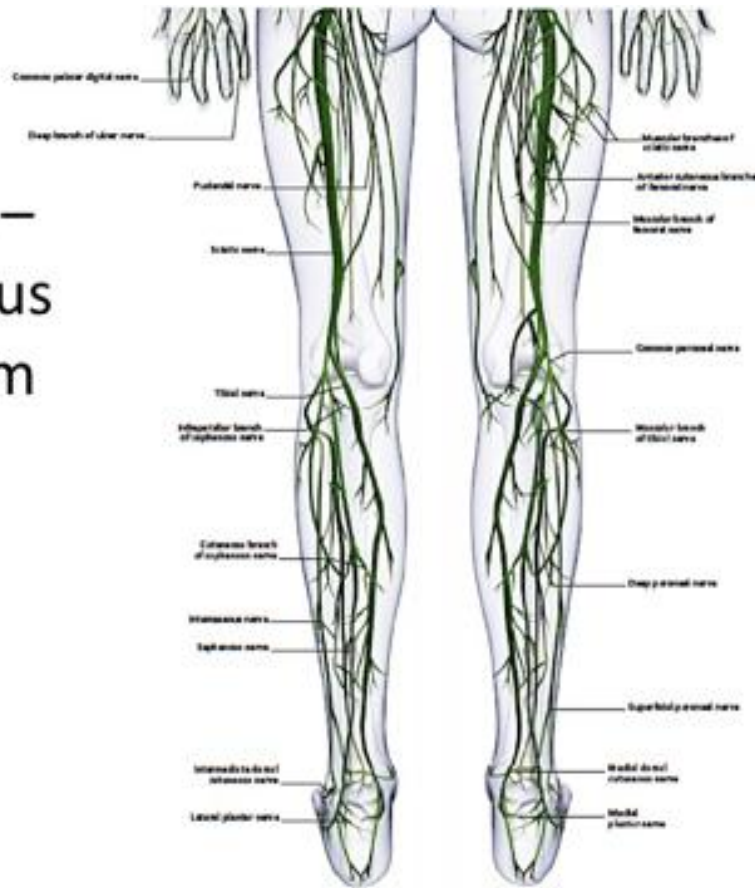
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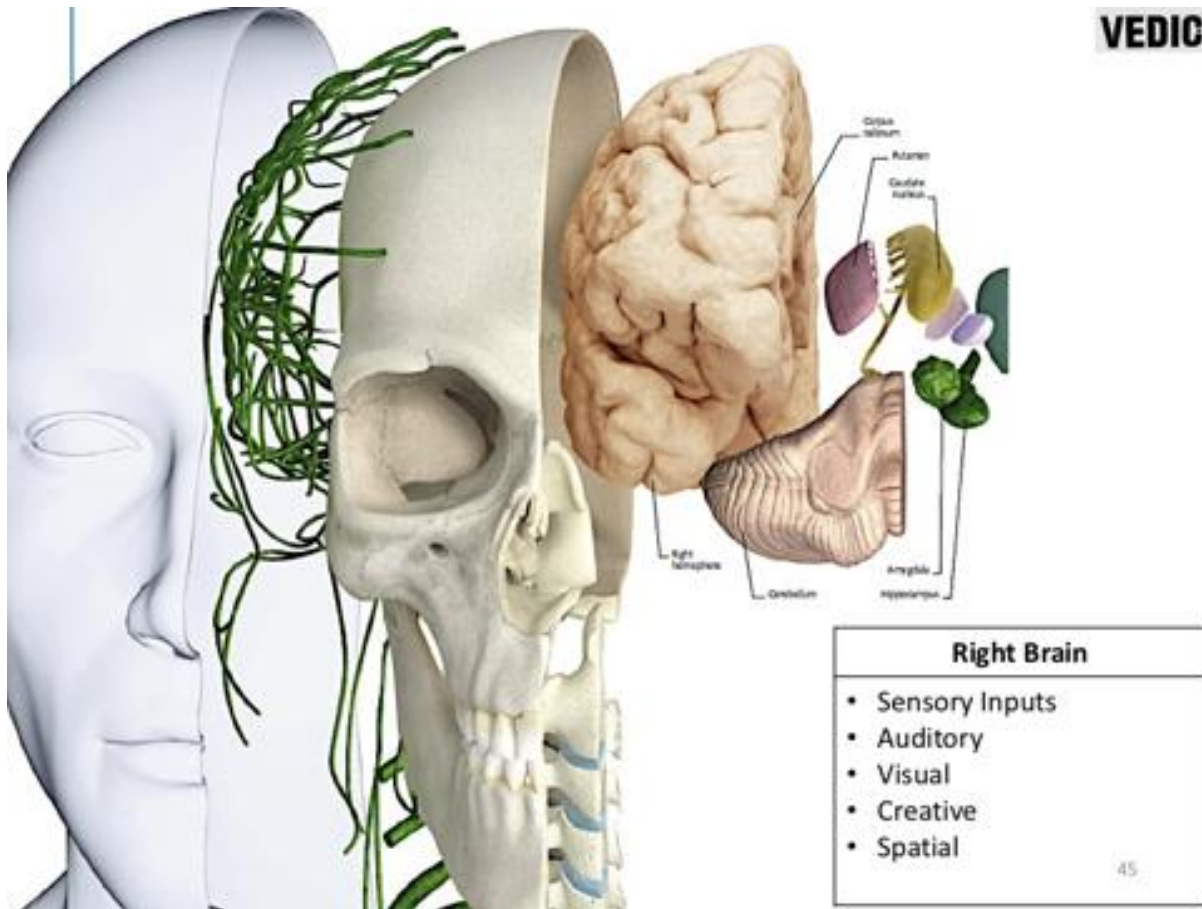


**Brain -
Nervous
System**

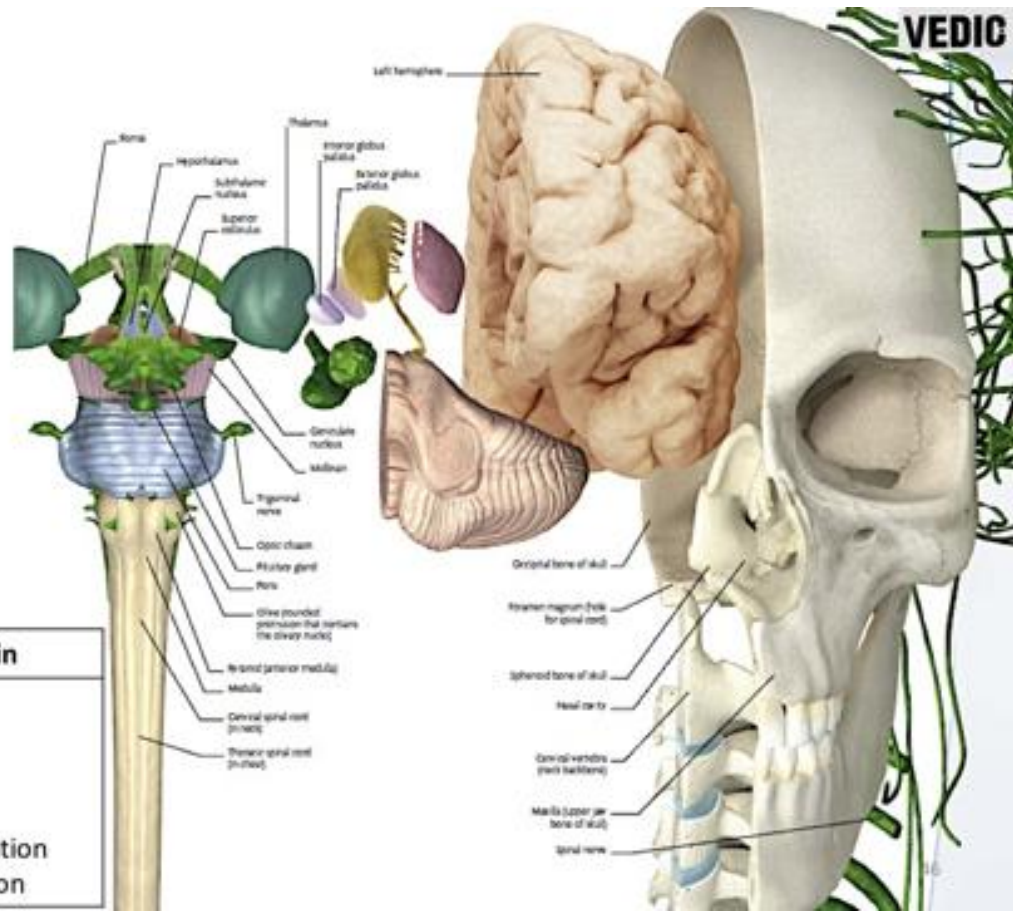


Brain – Nervous System





Left Brain
• Speech
• Language
• Reasoning
• Analysis
• Communication
• Muscle action





Left or Right ??

VEDIC

RED **YELLOW** **BLUE** **ORANGE**

BLACK **PINK** **WHITE** **GRAY**

YELLOW **RED** **GRAY** **BLACK**

BLACK **ORANGE** **YELLOW** **BLUE**

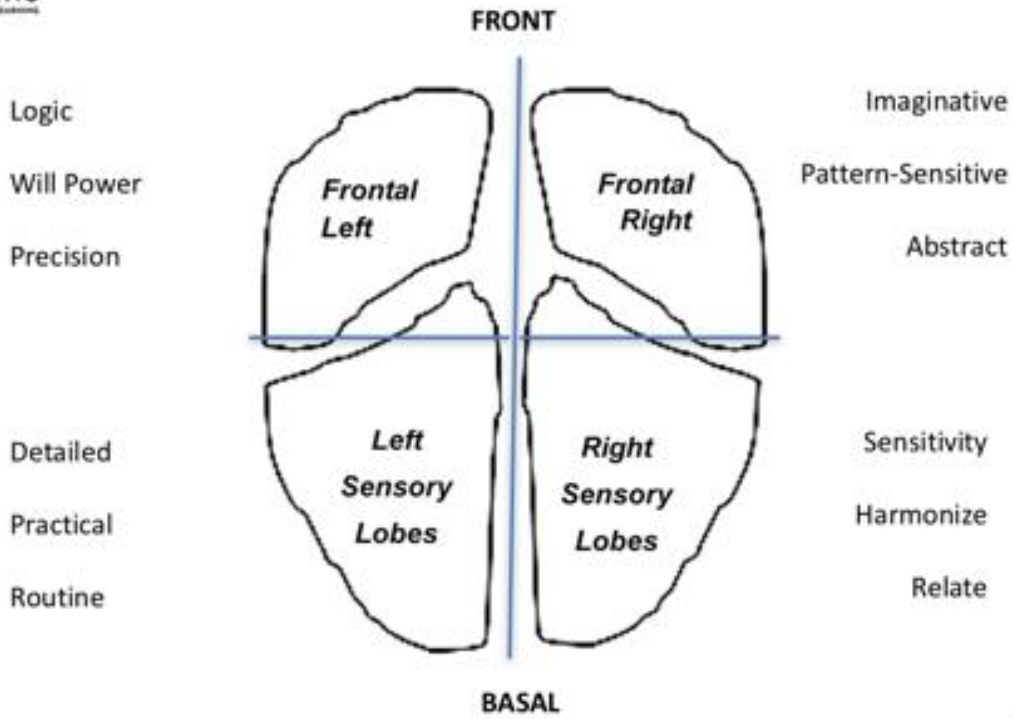
Look at the colors below and say the colors and not the word.

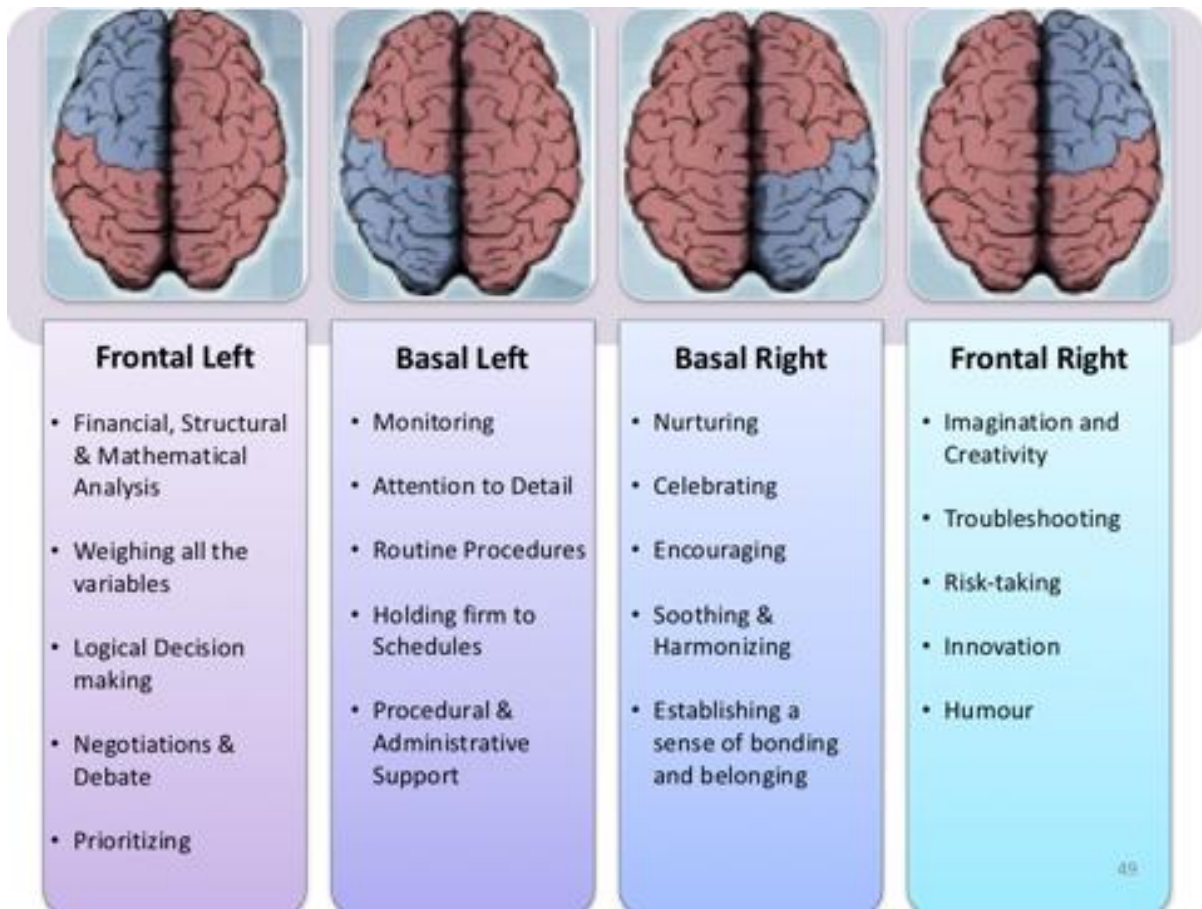
Right Brain : Says **COLORS**

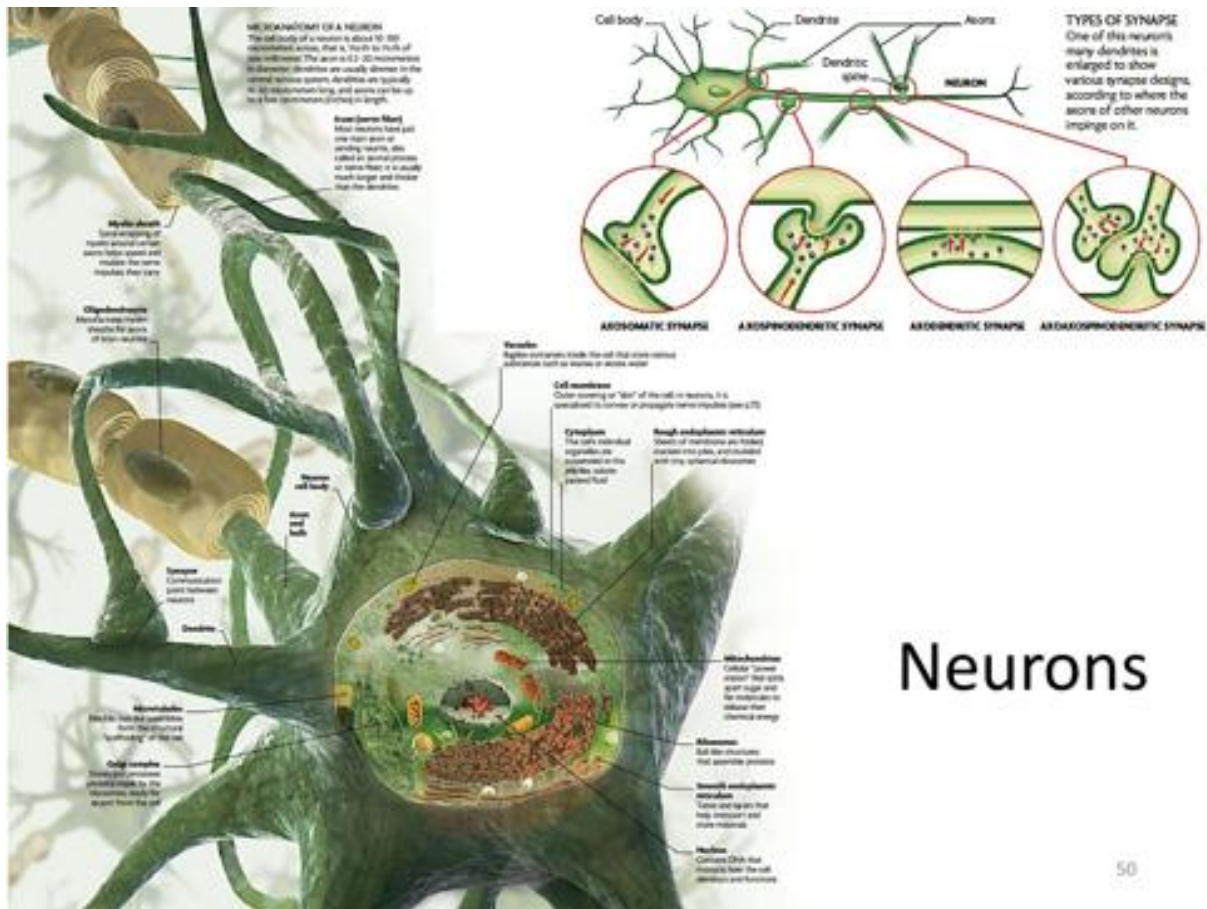
Left Brain : Says **WORDS**

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Four Quadrants of our Brain



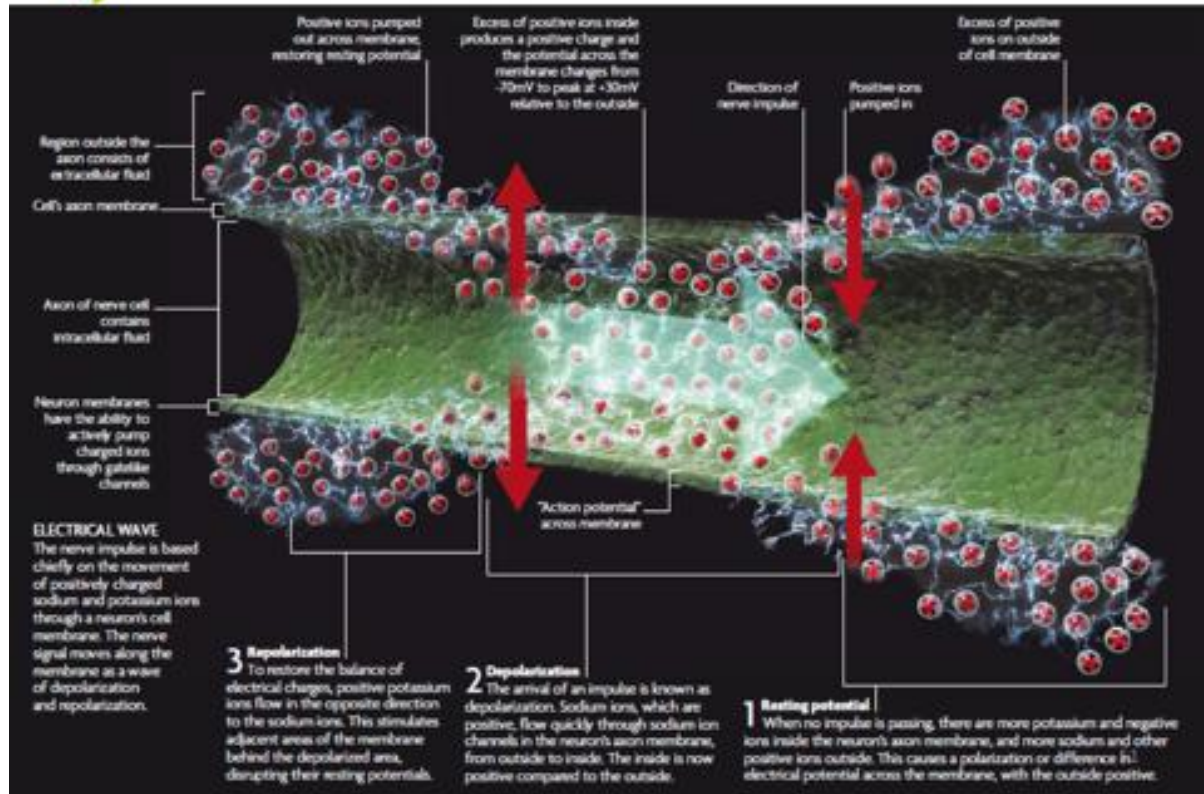






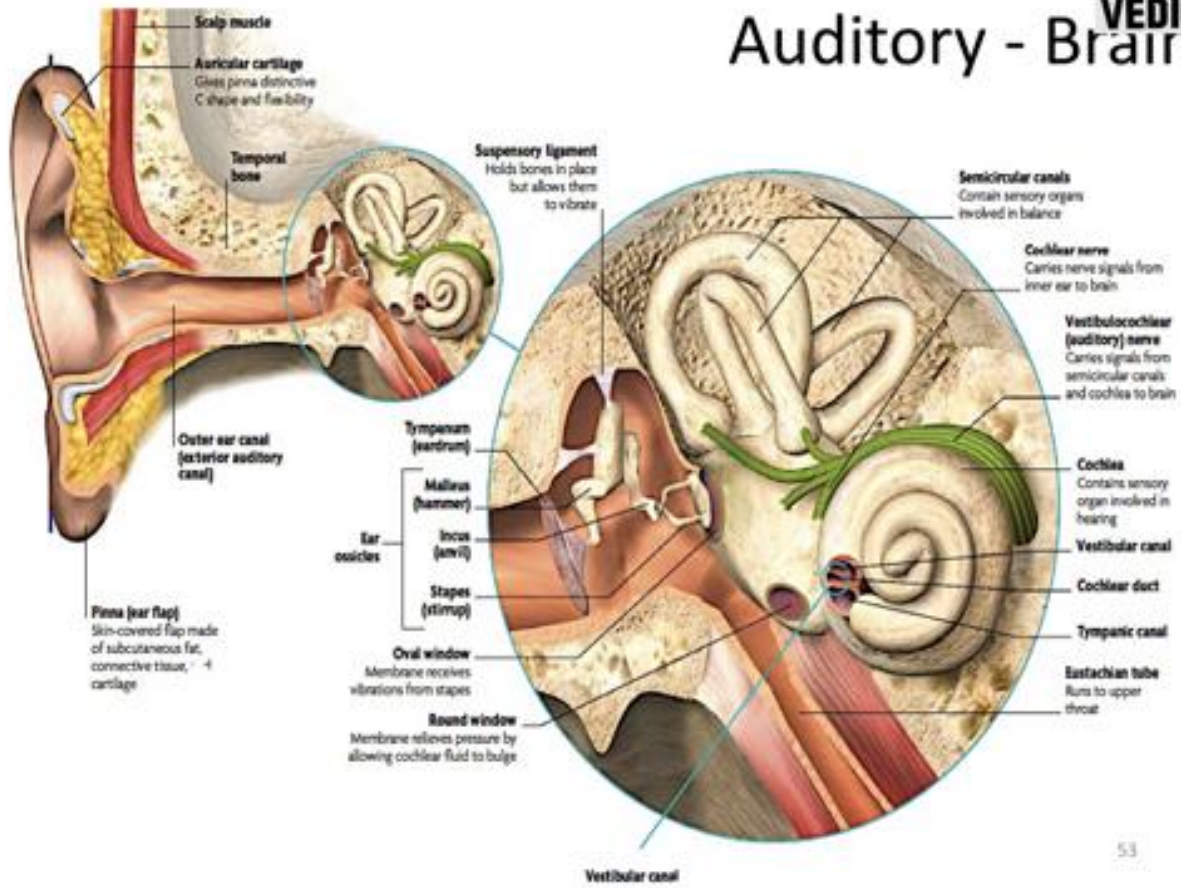
Electrical Impulse in a Brain

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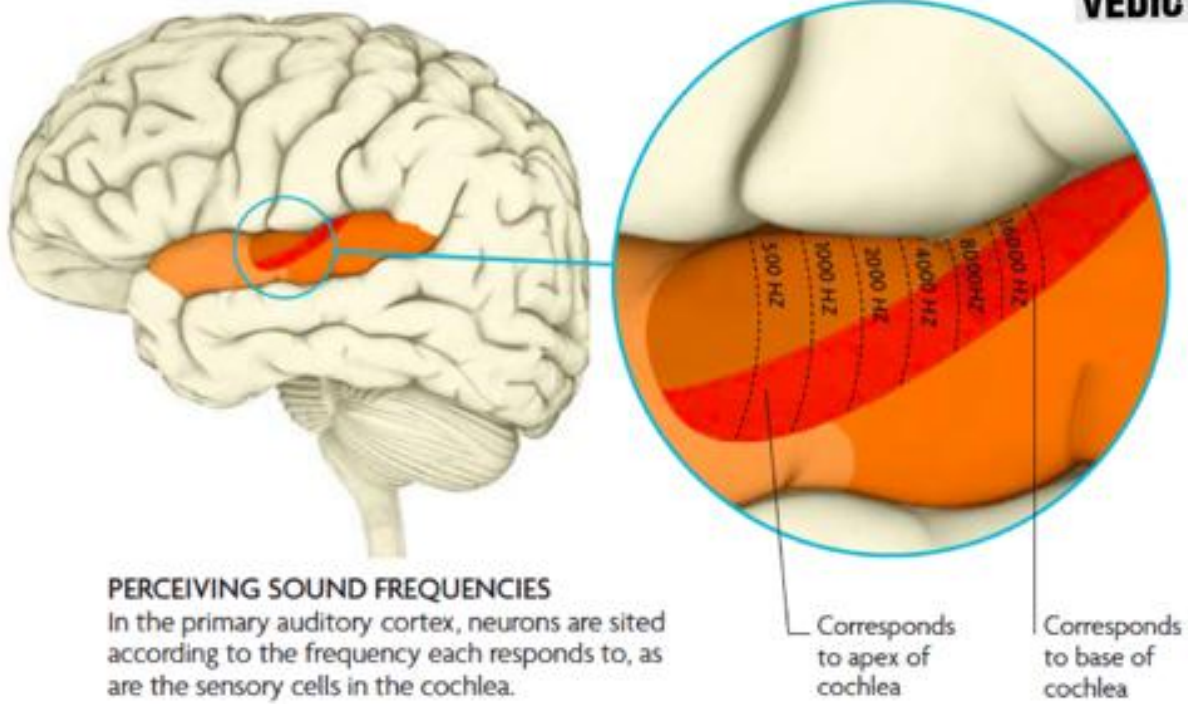


Visual - Brain





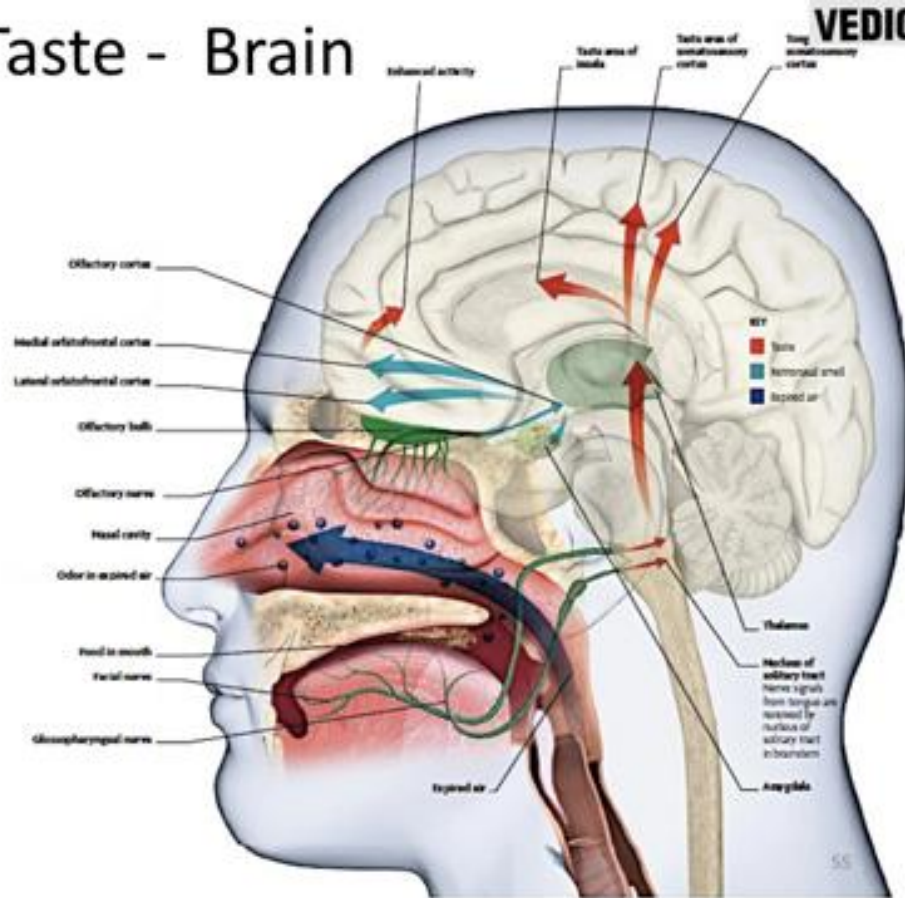
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Smell & Taste - Brain

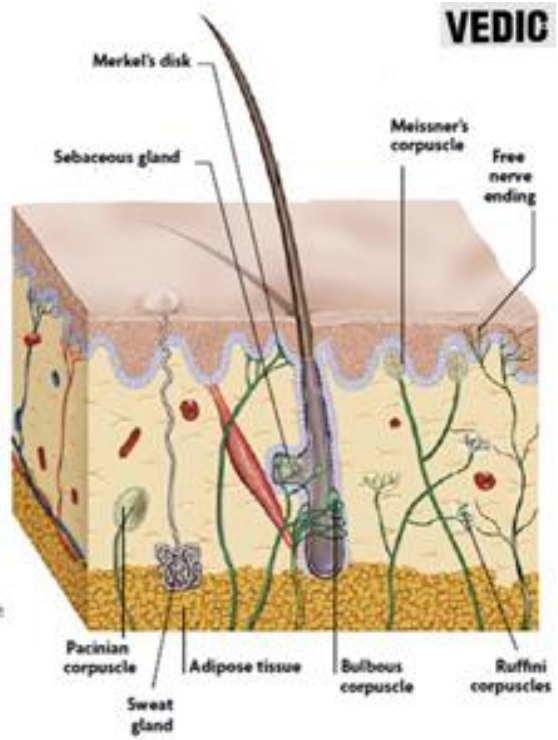
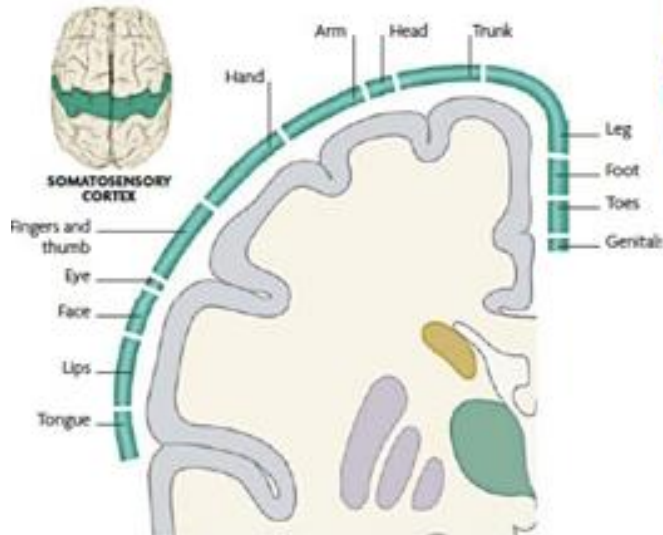
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Touch - Brain

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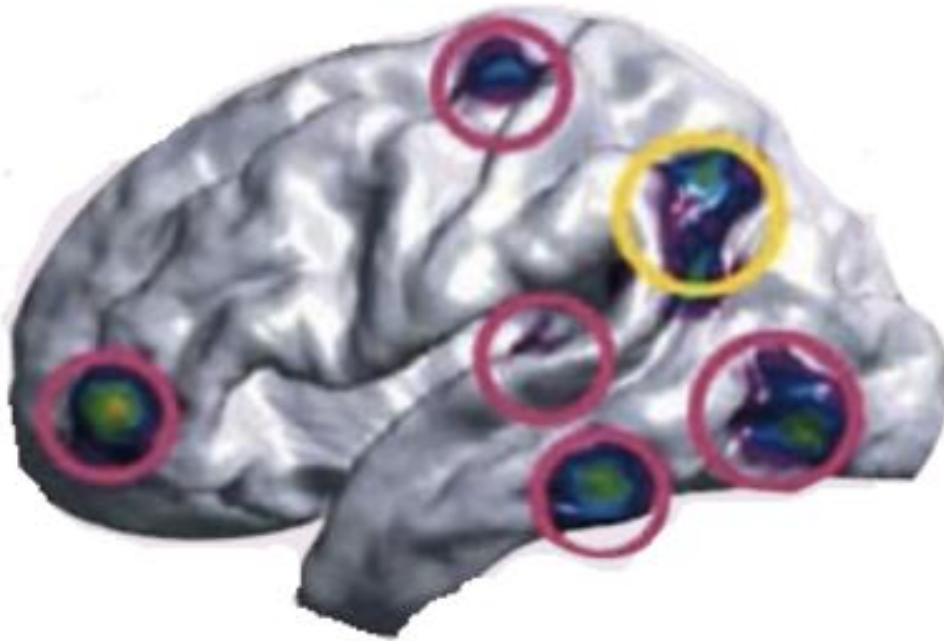
Memory & Intelligence

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- **Memory**
 - The ability to 'recall a song' or 'recognize a face' on demand
 - A vague vision of some long past event
 - The skill required to ride a car; or the knowledge that your car keys are on the table.

- All these phenomena have something common called "learning", and learning results in 'total' or 'partial' reconstruction of a past experience.
- Learning is a process in which neurons fire together to produce a particular experience.
- Every time neurons are fired, the learning is altered so that they have a tendency to fire together again.
- The subsequent combined firing of the neurons reconstructs the original experience, producing a "recollection" of it.
- The act of recollecting makes the neurons involved even more likely to fire again in the future.
- So repeatedly reconstructing an event makes it increasingly easy to recall.

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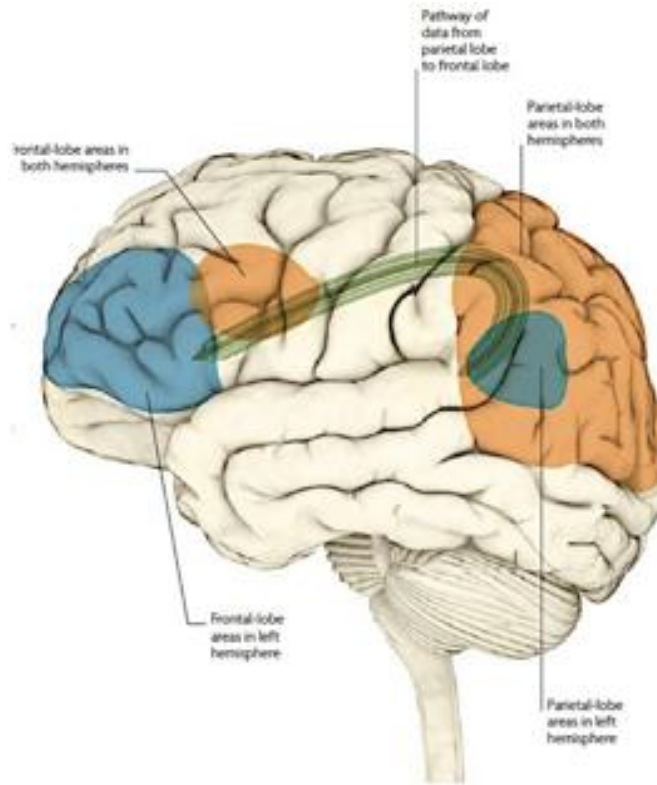
Intelligence

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Intelligence refers to the ability to

- learn about,
 - learn from,
 - understand and
 - interact with ones environment
-
- It embraces many different types of skills, such as
 - physical dexterity,
 - verbal fluency,
 - concrete and abstract reasoning,
 - sensory discrimination,
 - emotional sensitivity,
 - numeracy and
 - the ability to function well in society

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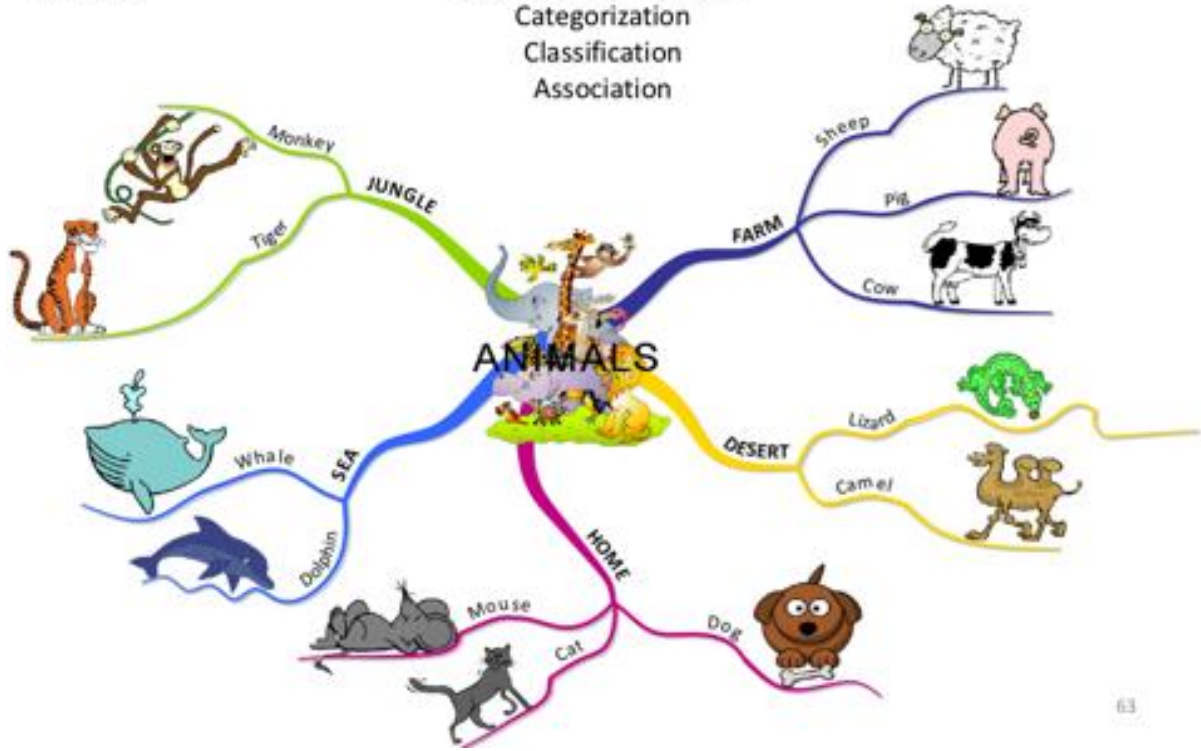


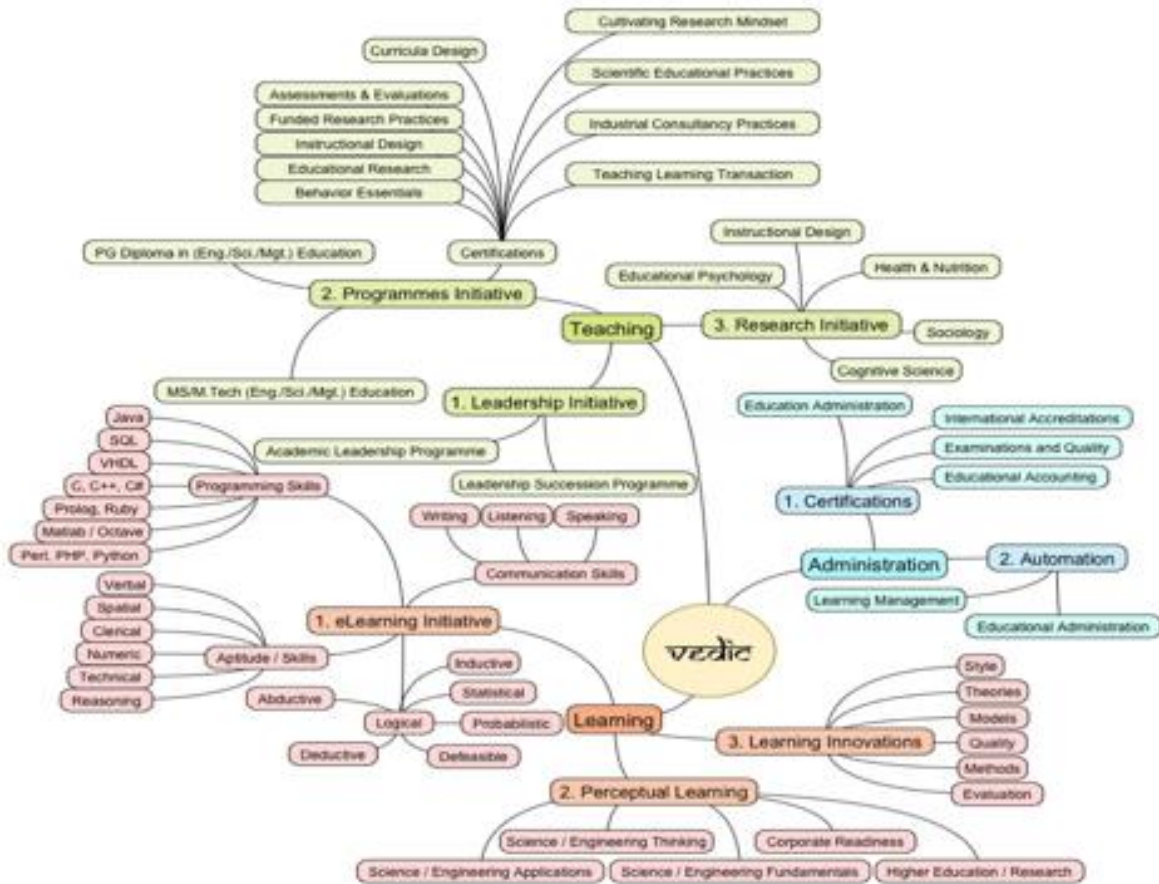
Memory Process

Stage	What's meant to happen	What can go wrong
Selection	The brain is designed to store information that will be useful in future	Important events are neglected or irrelevant ones are selected
Storing	Selected experiences/memorization is stored	Information may be 'misfiled'
Recollection	Current events should stimulate the recollection of appropriate memories	Current event fails to prompt useful memories
Change	Each time a memory is recalled, it is altered slightly to accommodate new information	Alteration may create false memories
Forgetting	Information not refreshed would be forgotten	Useful information is forgotten

62

Brain Learns through....
 Categorization
 Classification
 Association





What contributes to intelligence

Factor	Effect
Genes	50 different genes are related to Intelligence
Brain Size	Bigger brain have more intelligence. Size of neural density determines how intelligent
Signaling Efficiency	Speed of neural signaling
Environment	Social environment during infancy, verbal interaction

65

Each Team would arrive at a list of characteristic requirements for a :

Team 1 : Music Teacher

Team 2 : Mathematics Teacher

Team 3 : Car Driving Instructor

Team 4 : Civil Engineer for constructing a house

Team 5 : Medical Doctor

Team 6 : Lawyer

Team 7 : Art School / Creative Firm

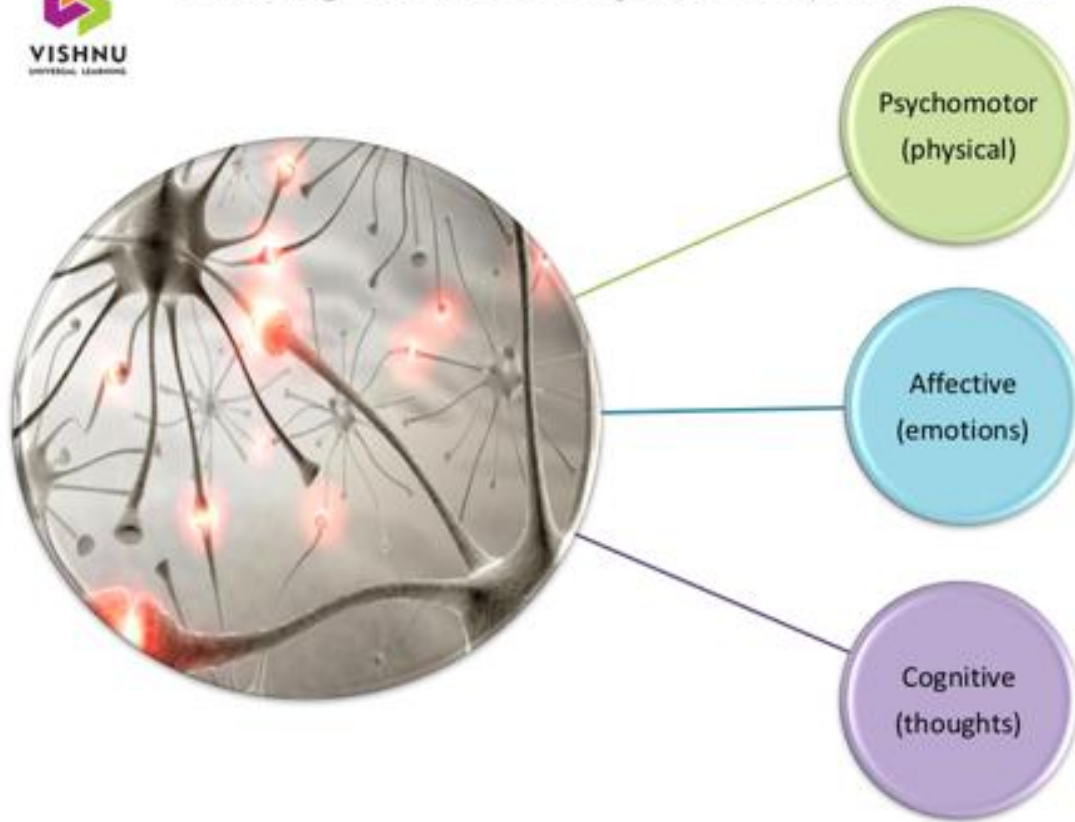
Team 8 : Start a Business (other than education)

Team 9 : Start a Educational Institution

Team 10 : Politician

66

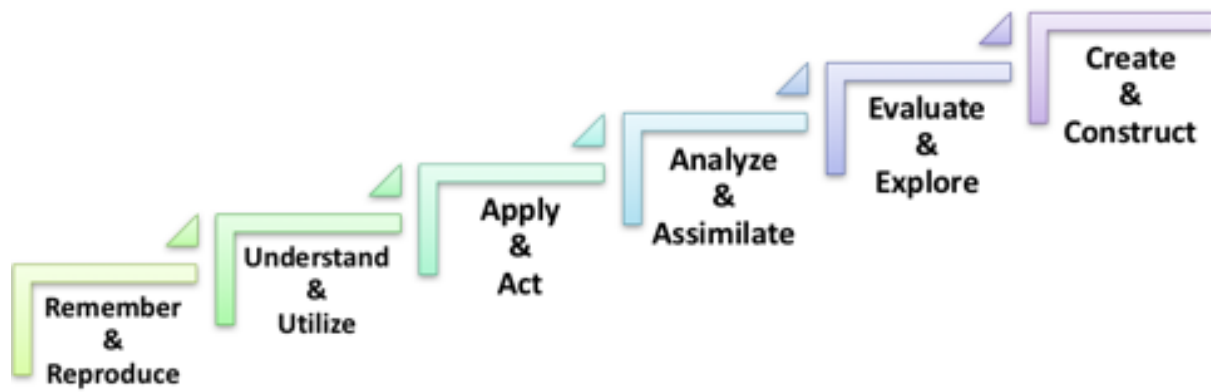
Brain generates signals to perform...

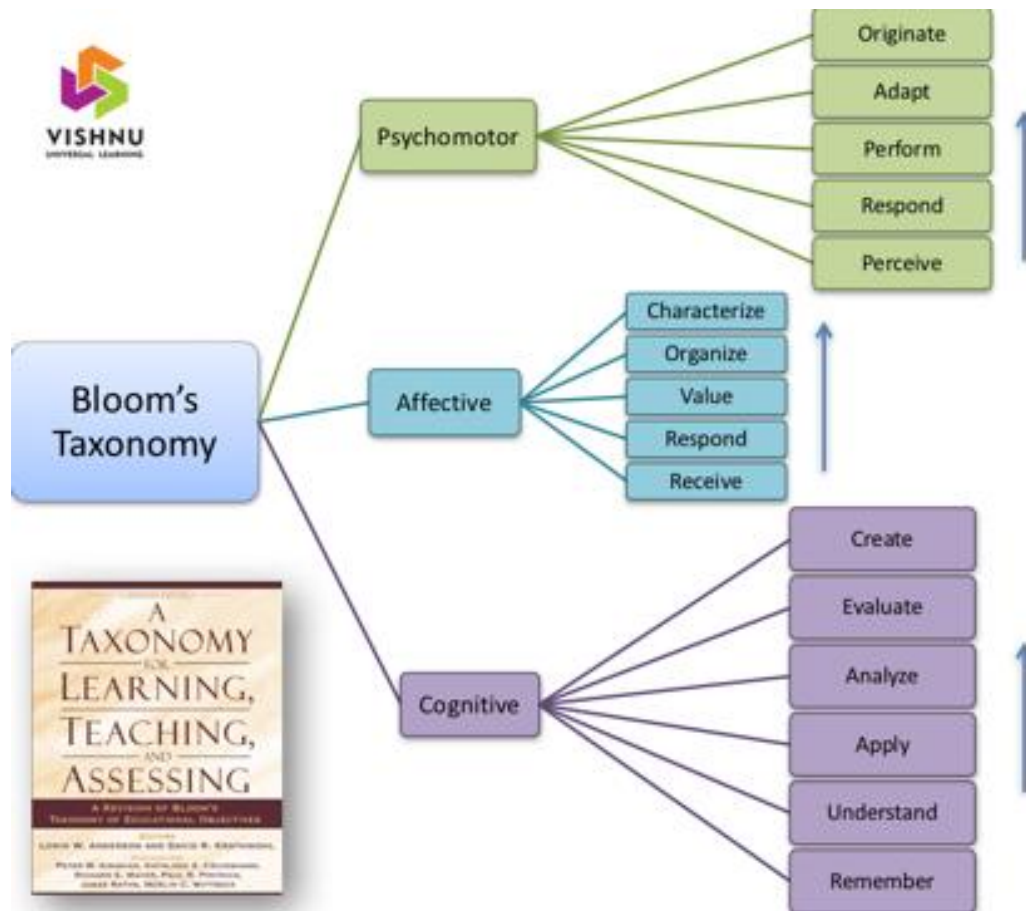


67



Teaching & Learning Levels







S.M.A.R.T. Model

- **Specific**
- **Measurable**
- **Attainable**
- **Relevant**
- **Timely**

70

Can we create
Questions
using Taxonomy of Learning

71



Nature Smart
(Naturalist)



People Smart
(Interpersonal)



Number Smart
(Logical / Mathematical)



Picture Smart
(Spatial / Visual)



Self Smart
(Intrapersonal)



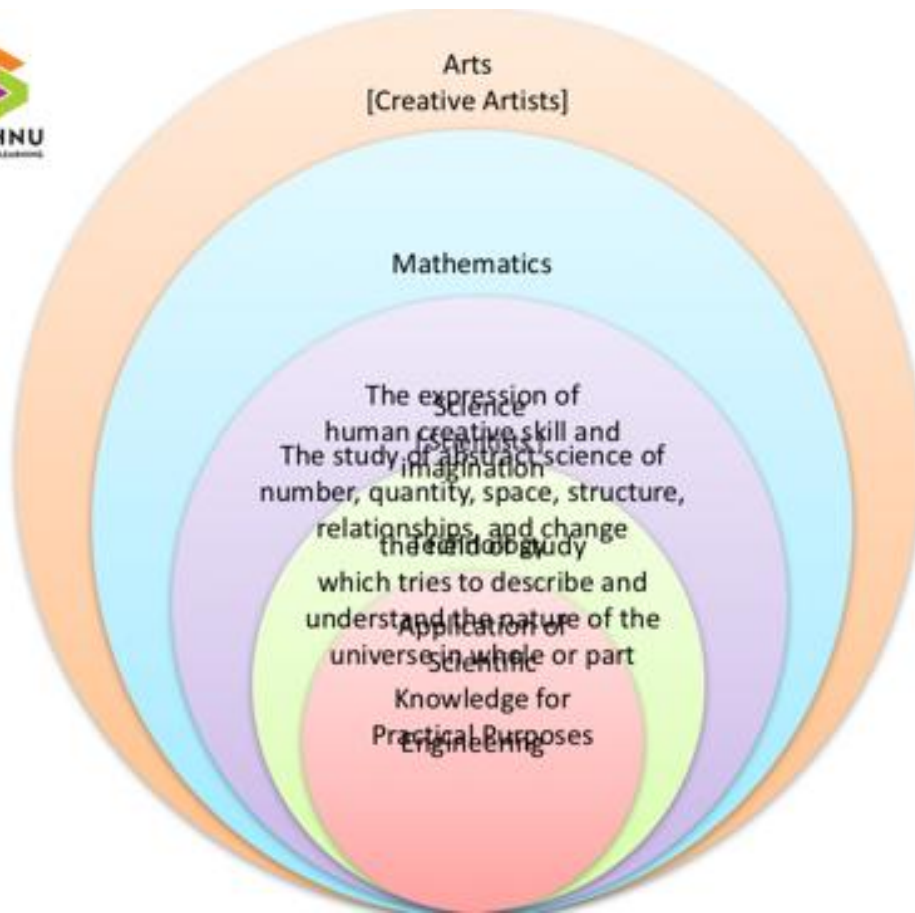
Body Smart
(Bodily - Kinesthetic)

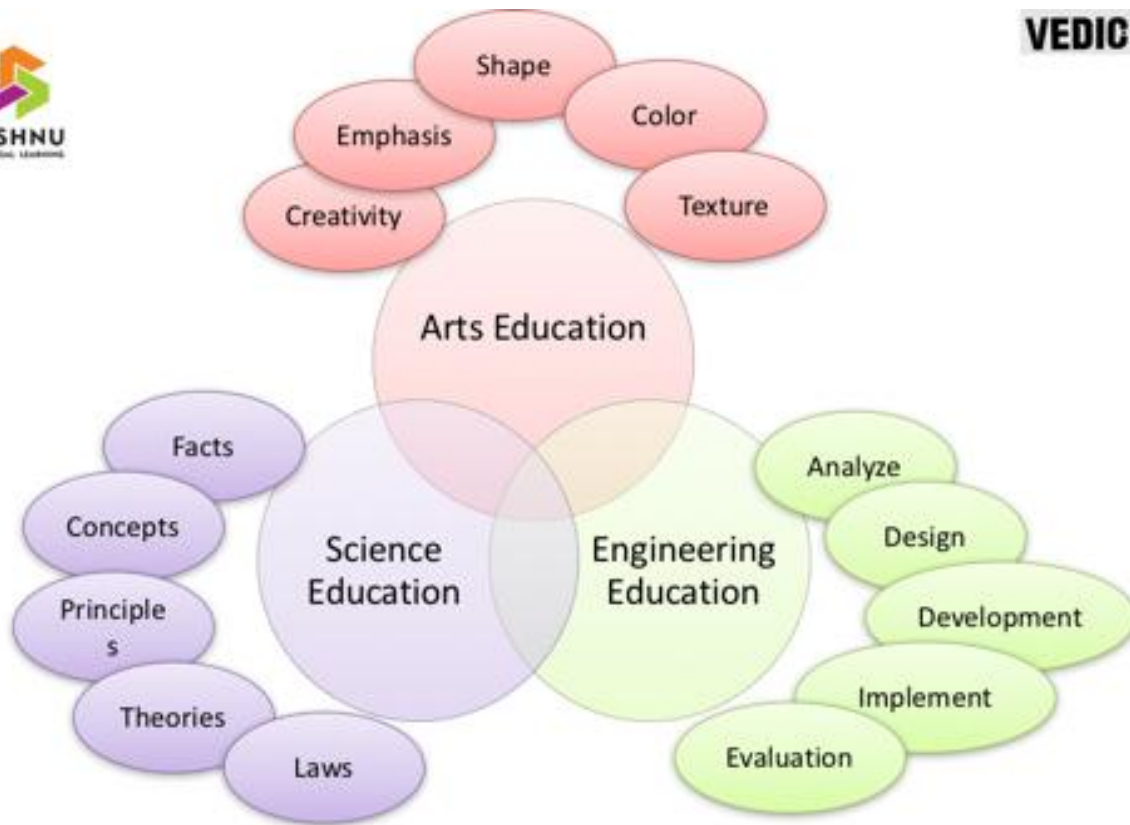


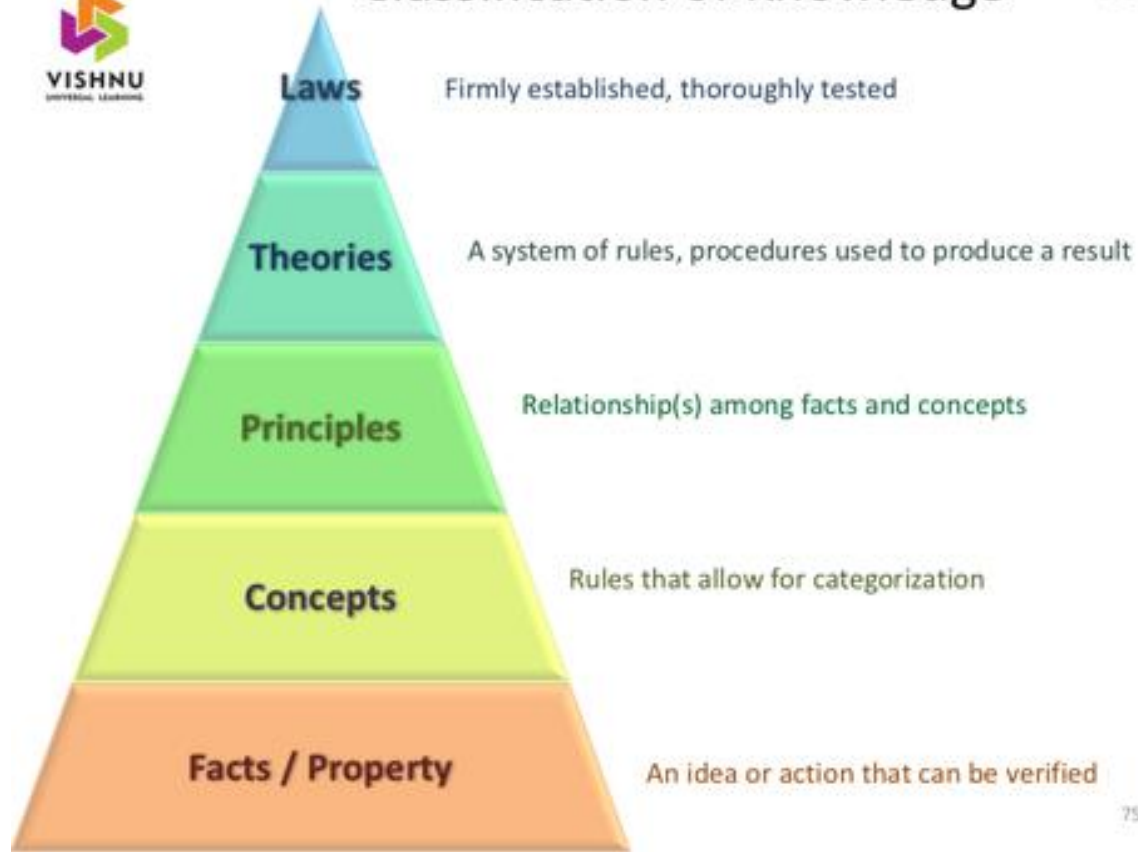
Music Smart
(Musical)



Word Smart
(Linguistic)
72

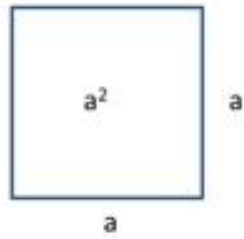




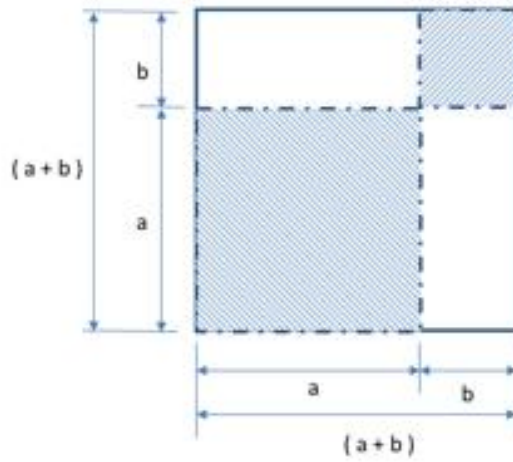
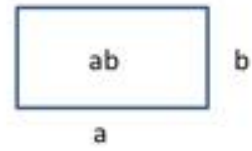


75

Shape ??
Area ??



Shape ??
Area ??

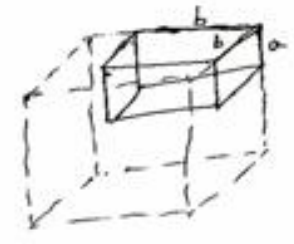
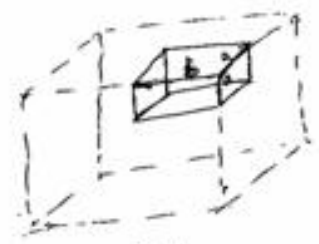
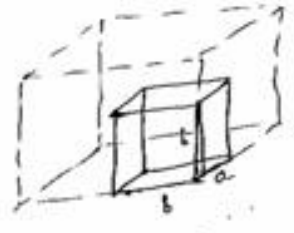
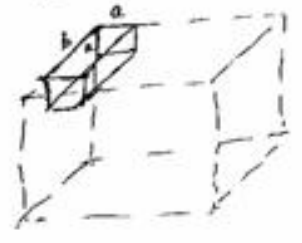
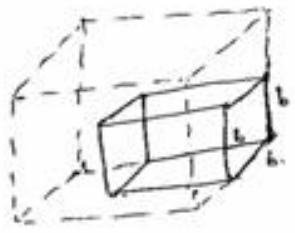
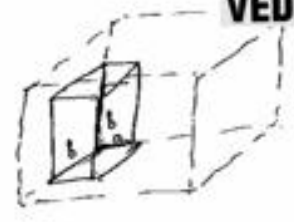
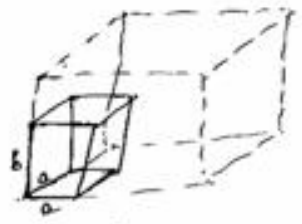
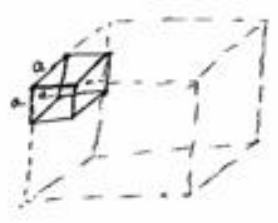


$$(a+b)^2 = a^2 + b^2 + 2ab$$

Solve: $(a + b)^3$

$$(a+b)^3 = a^3 + b^3 + 3a^2b + 3ab^2$$

VEDIC



$$(a^3 + b^3)$$

$$(3a^2b)$$

$$(3ab^2)$$

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MEANING of WORD

- **Pedagogy** = paidos + ago = child + lead
- **Andragogy** = andras + ago = adult + lead
- **Ergonagy** = ergon + ago = work + lead



“Science” of Education

Terms used frequently in education space

- **Pedagogy** - the art and science of teaching (**kids**)
 - what is to be learnt, and how, is both determined and directed by the teacher
- **Andragogy** - the art and science of helping **adults** learn
 - What and how is determined by the teacher and directed by the learner
- **Heutagogy** - the art and science of **facilitating** the learner
 - both determination and direction shifts to the learner (training teachers)
- **Ergonagy** - the art and science of helping people learn to **work**
 - concept of occupational-vocational (skill based) education (laboratory courses)
- **Ubuntugogy** - art and science of learning **from society / community**
 - Leveraging on community for learning

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- **Peeragogy / Paragogy** - the art of learning from peers
 - the learners leverage on their own experience & expertise for learning
 - Groups of learners may be of different age, experience, expertise etc.,
- **Cybergogy** - the art of learning from cyber world
 - What and how is self-determined and learned from multiple sources

	Paradigm	Focus	In other words	VEDIC
PEDAGOGY	Teacher Centered	Competence	imparting knowledge and skills to 'passive' or 'dependent'	
ANDRAGOGY	Experience determined	Capability	teachers helping adults to learn based on the adults needs	
HEUTOGOGY	Self Determined	Troubleshooters problem solvers	...learners themselves determine what and how they need to learn	
ERGONAGY	Occupational-Vocational	Education at through work	education and training related to preparation for and performance of work, where the learning is continually blended	
UBUNTUGOGY	Essentialist	Holistic / Integrative	intellectual growth, constructive thinking, conceptualization and creativity, education for life	
TIRBYI	Teacher/Religious Centered	Tawhid i.e. the overall harmony and patterning of the universe	giving knowledge to children; developing their skills; teaching at school or colleges through a belief that knowledge is only possible through the guidance of the supreme	
TECHNOGOGY	Transformative	Learner centered based on enabling technologies	.. learning and teaching happen as a result of the use of technologies	82

“Pedagogy and Andragogy”



Pedagogy Vs Andragogy

VEDIC

	Pedagogical	Andragogical
The Learner	<ul style="list-style-type: none">• The learner is dependent upon the teacher for all learning• The teacher assumes full responsibility for what is taught and how it is learned• The teacher evaluates learning	<ul style="list-style-type: none">• The learner is self-directed• The learner is responsible for his/her own learning• Self-evaluation is characteristic of this Approach
Role of the Learner's Experience	<ul style="list-style-type: none">• The learner comes to the activity with little experience that could be tapped as a resource for learning• The experience of the instructor is most influential	<ul style="list-style-type: none">• The learner brings a greater volume and quality of experience• Adults are a rich resource for one another• Different experiences assure diversity in groups of adults• Experience becomes the source of self-identify



Pedagogy Vs Andragogy

	Pedagogical	Andragogical
Readiness to Learn	<ul style="list-style-type: none">• Students are told what they have to learn in order to advance to the next level of Mastery	<ul style="list-style-type: none">• Any change is likely to trigger a readiness to learn• The need to know in order to perform more effectively in some aspect of one's life is important• Ability to assess gaps between where one is now and where one wants and needs to be
Orientation to Learning	<ul style="list-style-type: none">• Learning is a process of acquiring prescribed subject matter• Content units are sequenced according to the logic of the subject matter	<ul style="list-style-type: none">• Learners want to perform a task, solve a problem, live in a more satisfying way• Learning must have relevance to real-life tasks• Learning is organized around life/work situations rather than subject matter units



Pedagogy Vs Andragogy

VEDIC

	Pedagogical	Andragogical
Motivation for Learning	<ul style="list-style-type: none">• Primarily motivated by :<ul style="list-style-type: none">• external pressures,• competition for grades, and• consequences of failure	<ul style="list-style-type: none">• Internal motivators:<ul style="list-style-type: none">• self-esteem• recognition• better quality of life• self-confidence• self-actualization

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Learning Flow (LF)

- Class duration 45-50 min = 2-3 LF
- 1 LF = 10-20 min

Typical Learning Flow

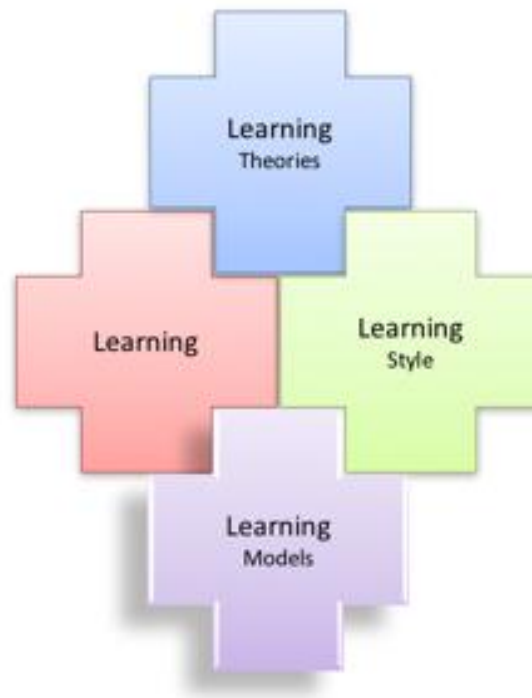


Our Present Position

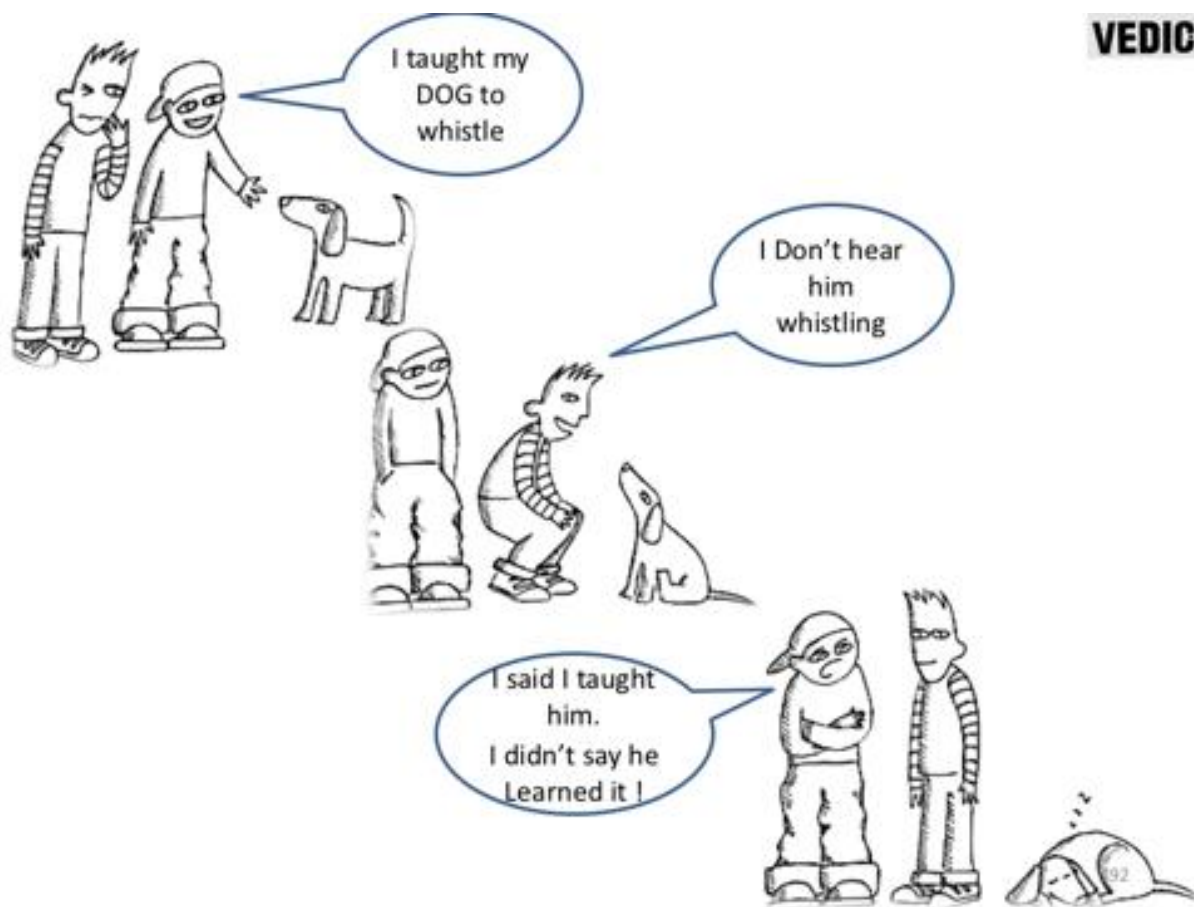


Learning Styles

- Discuss on the various learning styles given in the activity sheets
- Every participant will find scenario's where the respective learning style is prominent







Learning Models

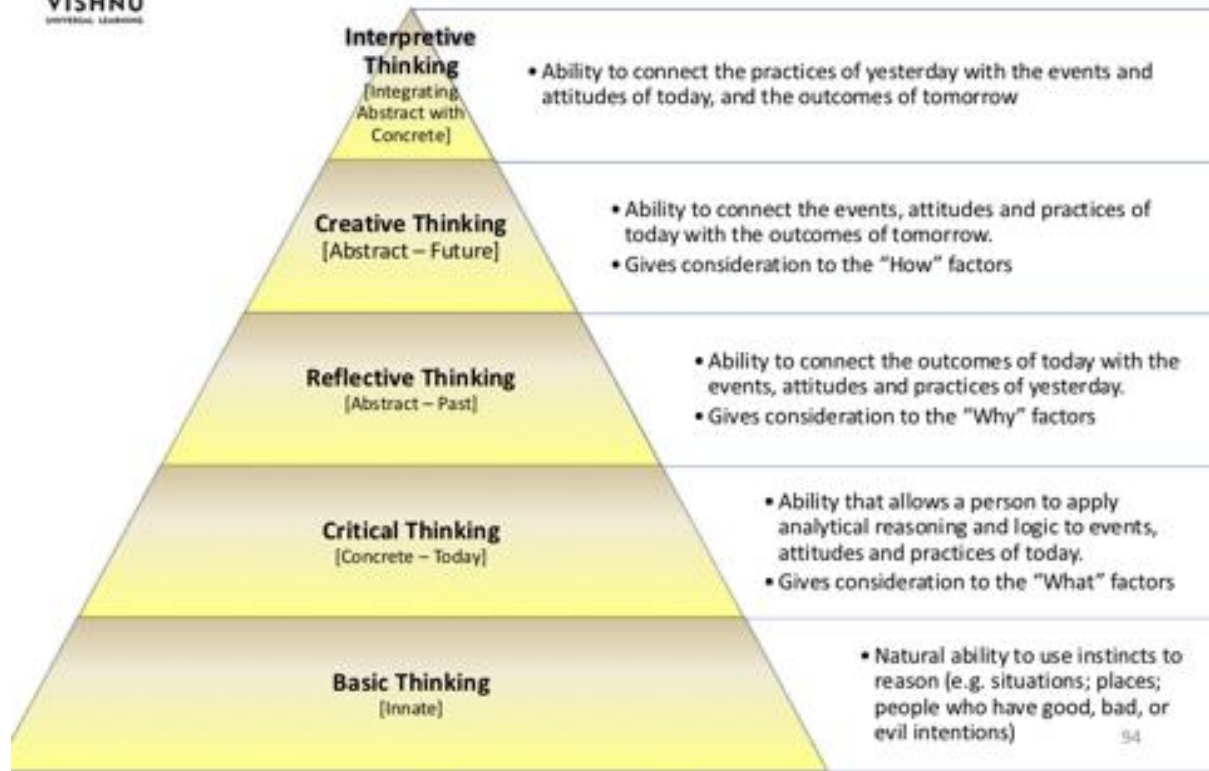
Top 2 Learning Models used for Effective Learning:


1. Active Learning

- a. Inquiry Based Learning
- b. Problem Based Learning
- c. Case Based Learning

2. Experiential Learning

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People generally remember... (learning activities)

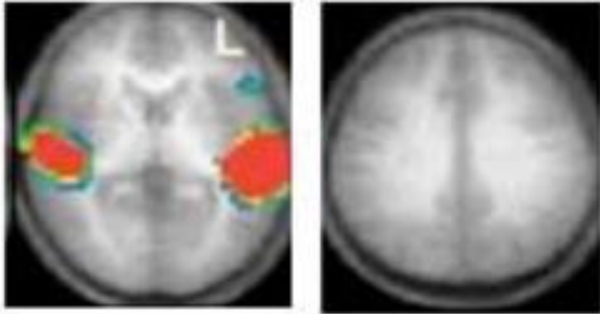
People are able to... (learning outcomes)



Dale's Cone of Learning

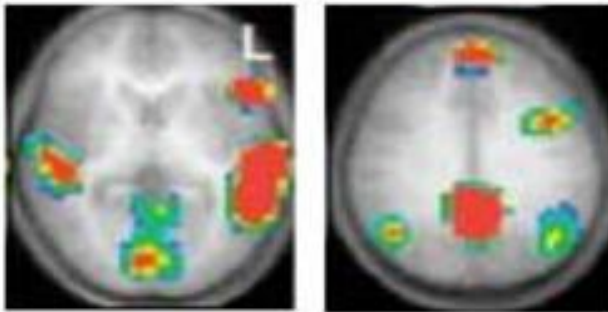
Passive

Listening & Learning

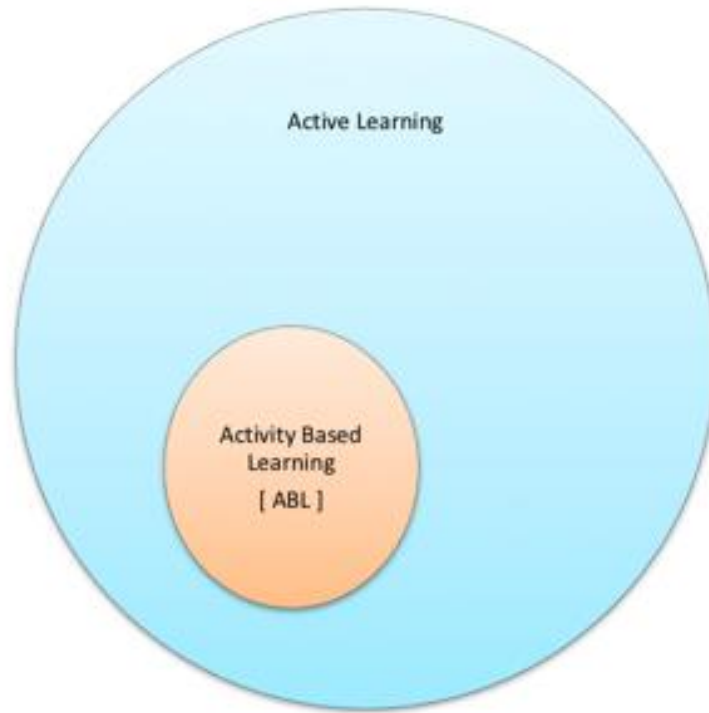


Active

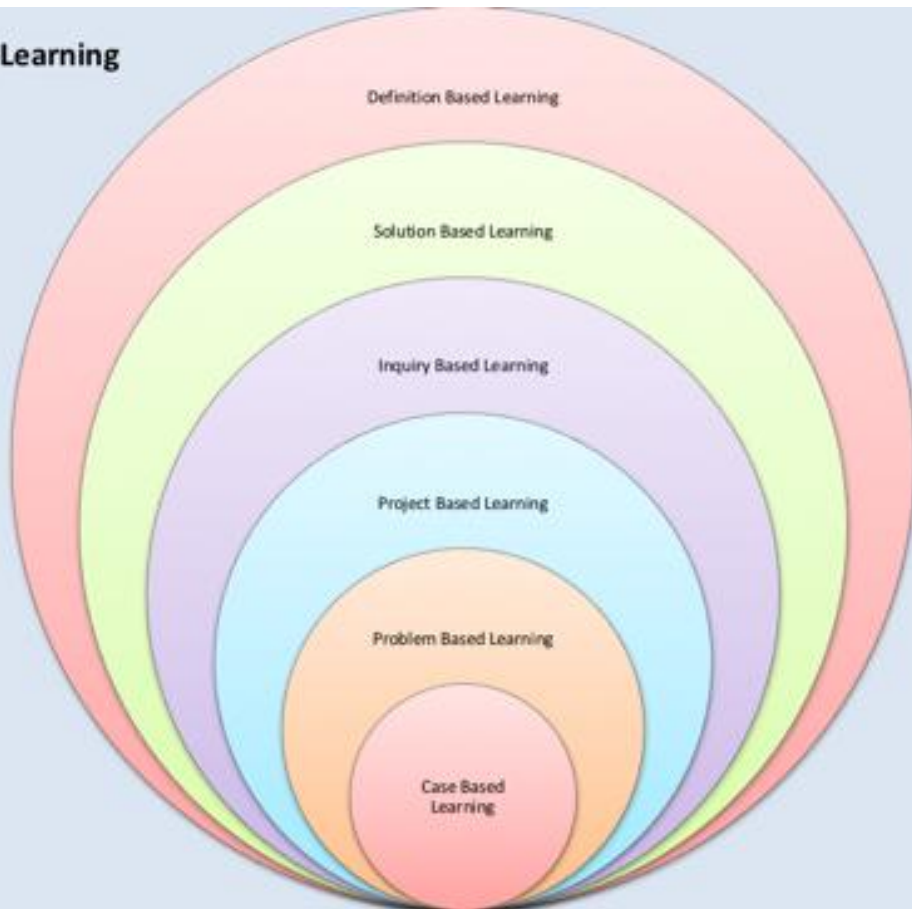
Listening & Learning

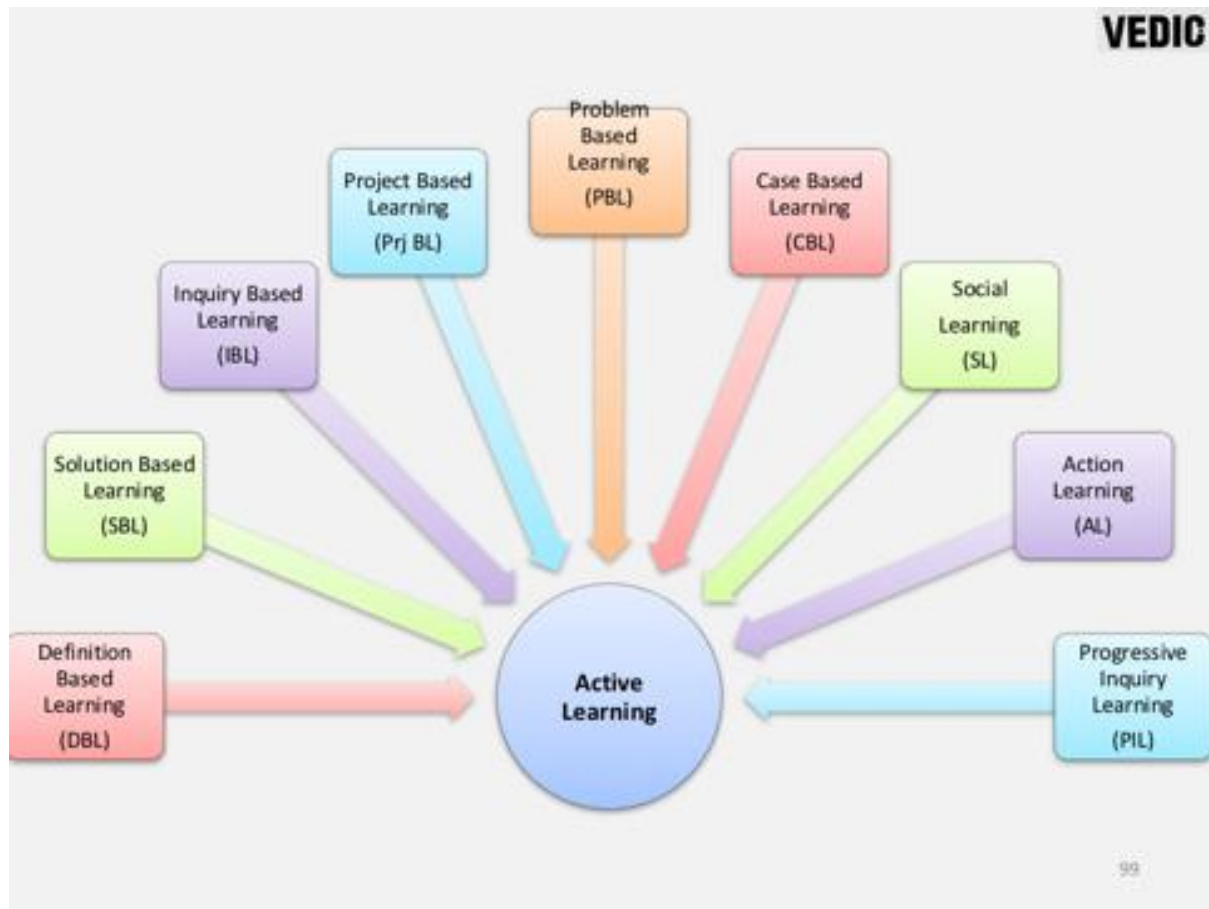


Active & Activity Based Learning (ABL)



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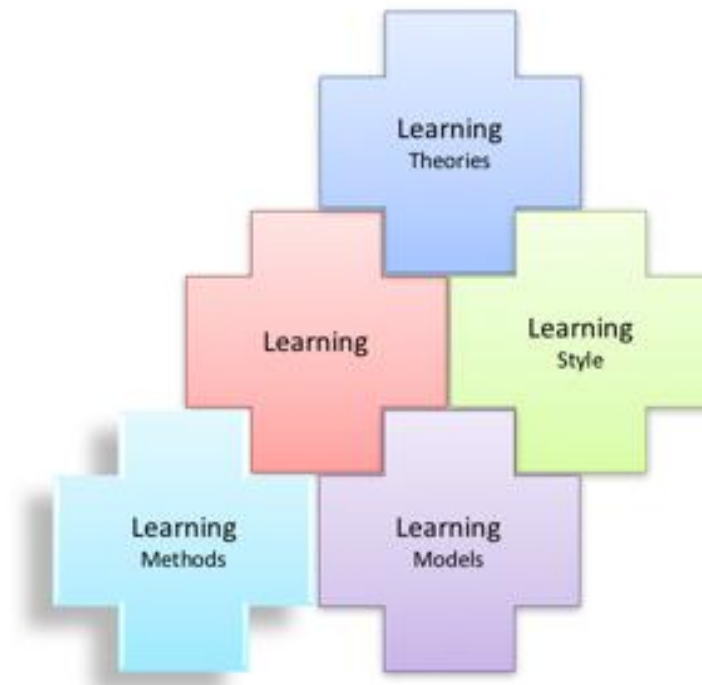




Learning	Description
1. Definition Based	A. Students actively pose questions, investigate, solve problems, and draw conclusions about the topic
2. Solution Based	B. Problem is known, the method is to be selected by the students... it is also termed as 'problem solving' mode of learning
3. Inquiry Based	C. Both Problem and Method are known to students... it is also termed as 'routine' mode of learning
4. Project Based	D. A complex case is provided to students and followed with in-class discussion about content and concepts
5. Problem Based	E. An authentic problem is used to define and drive the student learning experience..... It is also termed as 'problem orientation' mode of learning
6. Case Based	F. Students work collaboratively to explore a problem or issue and create a presentation/product to demonstrate their learning

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Our Present Position

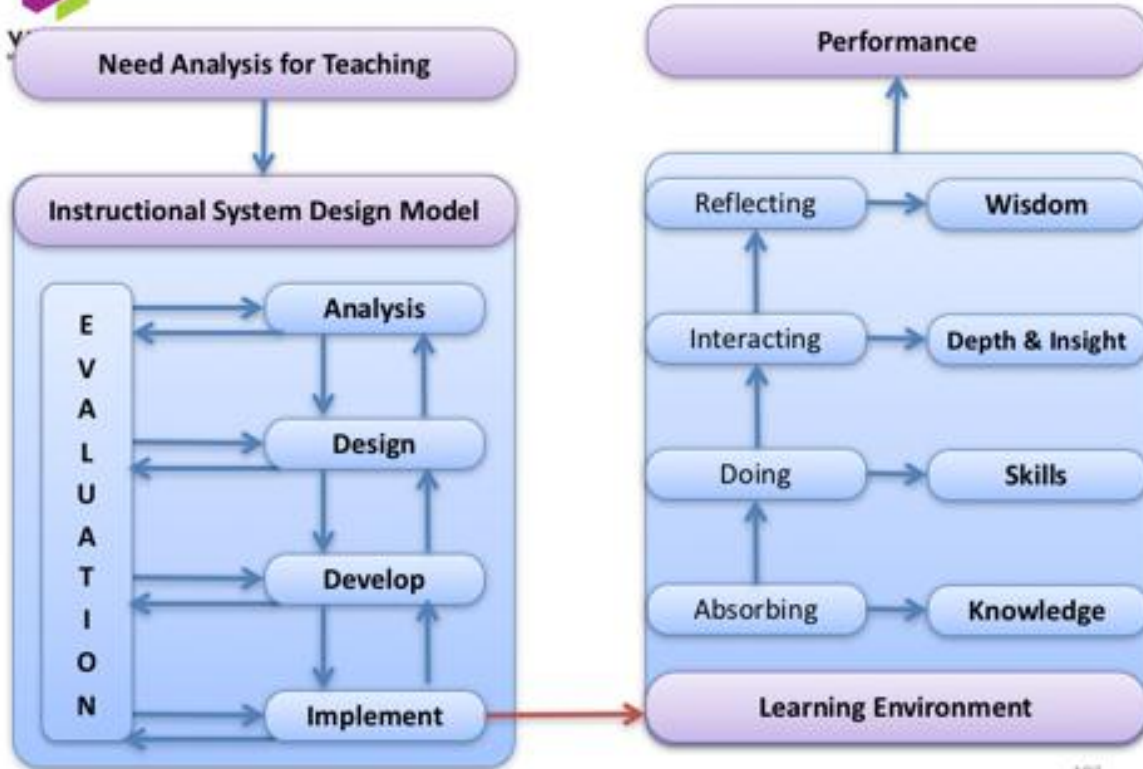


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Learning Methods & Environment

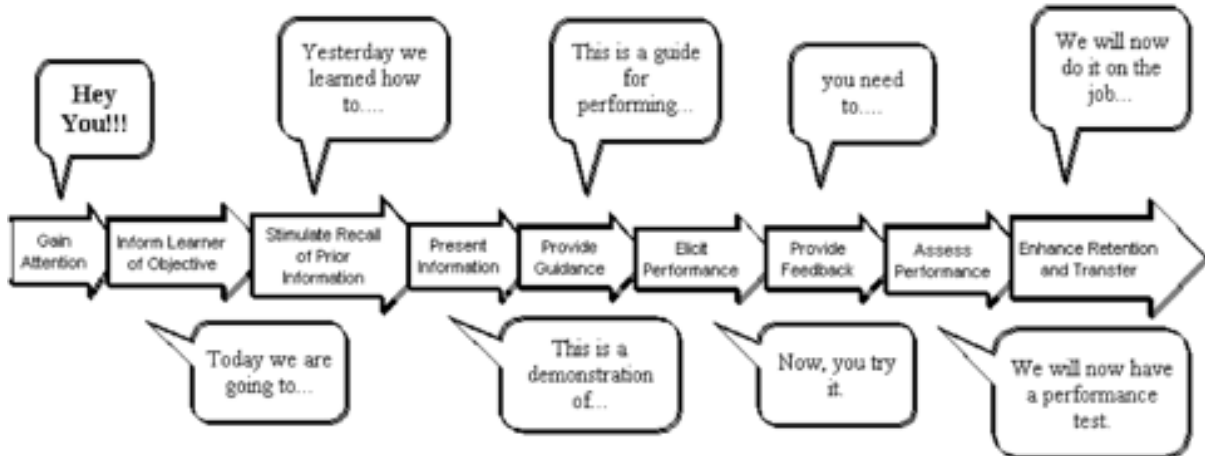


Instructional System Design Model



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Robert Gagne's 9 Events of Instruction



Robert Gagne's 9 Events of Instruction Model

Event of Instruction	Learning Process
1. Gaining attention Giving learner a stimulus to ensure reception of coming instruction	
2. Informing learner of objective Telling learner what they will be able to do for the instruction	Expectancy
3. Stimulating recall of prior learning Asking for recall of existing relevant knowledge	Retrieval to working memory
4. Presenting the stimulus Displaying the content	Pattern recognition; selective perception
5. Providing learner guidance Supplying organization and relevance to enhance understanding	Chunking, rehearsal, encoding

Robert Gagne's 9 Events of Instruction Model

Event of Instruction	Learning Process
6. Eliciting performance Asking learners to respond, demonstrating learning	Retrieval, responding
7. Providing Feedback Giving immediate feedback on learner's performance	Reinforcement, error correction
8. Assessing performance Providing feedback to learners' more performance for reinforcement	Responding, retention
9. Enhancing retention and transfer Providing diverse practice to generalize the capability	Retention, retrieval, generalization

Example : Recognize an equilateral triangle

1. **Gain attention** - show variety of computer generated triangles
2. **Identify objective** - pose question: "What is an equilateral triangle?"
3. **Recall prior learning** - review definitions of triangles
4. **Present stimulus** - give definition of equilateral triangle
5. **Guide learning**- show example of how to create equilateral
6. **Elicit performance** - ask students to create 5 different examples
7. **Provide feedback** - check all examples as correct/incorrect
8. **Assess performance**- provide scores and remediation
9. **Enhance retention/transfer** - show pictures of objects and ask students to identify equilaterals

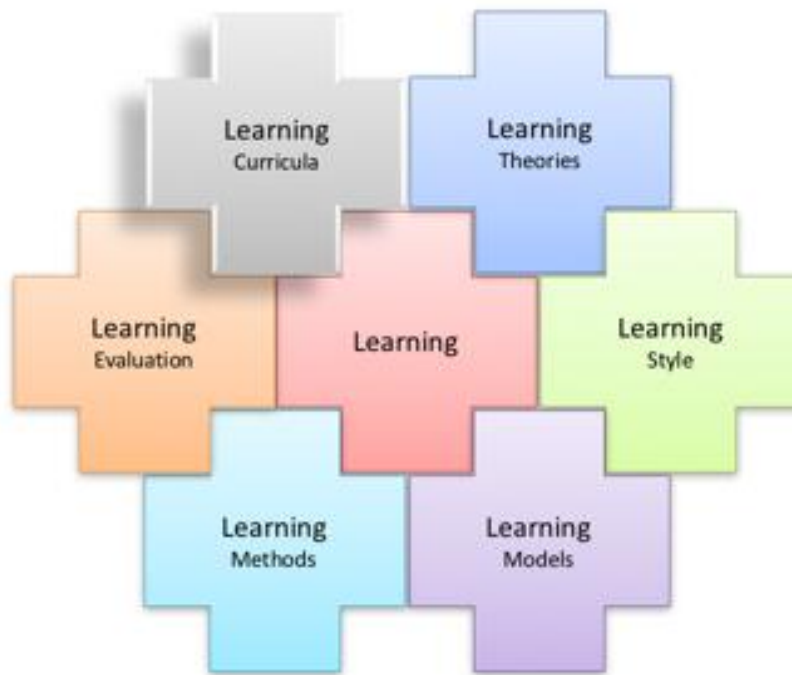
107

- The best known evaluation methodology for judging teaching programs is Donald Kirkpatrick's Four Level Evaluation Model
- Most widely used, Simple, Flexible and Complete

Levels	Description	Type	Form
4 Results	Was it worth doing teaching?	Summative	Correlation of learning results
3 Behavior	Did Knowledge, Skill, Attitude improve?	Summative	Observation of Performance
2 Learning	Did they learn anything at all?	Diagnostic Summative	Self-assessment Test
1 Reaction	Was the environment suitable for learning?	Reaction Formative	Survey, Real-time Polling, Quizzing

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Our Present Position



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- **CONCEIVE:**
 - To identify and define real world problems with creative thinking

- **DESIGN:**
 - To be able to approach a problem and outline possible solutions

- **IMPLEMENT:**
 - To apply and verify the possible solutions

- **OPERATE:**
 - To optimize and improve the solution and find better solutions. 110

Institutional Culture

Activities

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Planning for a Course

1. Course Plan
2. Topics & Competency Identification for every Unit
3. Session Learning Plan for each class-hour
4. Home Learning Plan for each class-hour

Institutional Culture

Activities

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1. Discipline

Define “Discipline”

“The practice of training people to obey rules or a code of behavior, using punishment to correct disobedience”

Do we need ‘*Punishment*’ to bring in discipline??

“Develop behavior by instruction and practice; especially to teach self-control”



Where do you think the
bubble gum you spit here goes ??

- (a) It jumps on its own and goes to dust bin
- (b) It drains through the sewage
- (c) Because of *poverty*, some poor chap picks it with his *bare hands* and disposes it for you

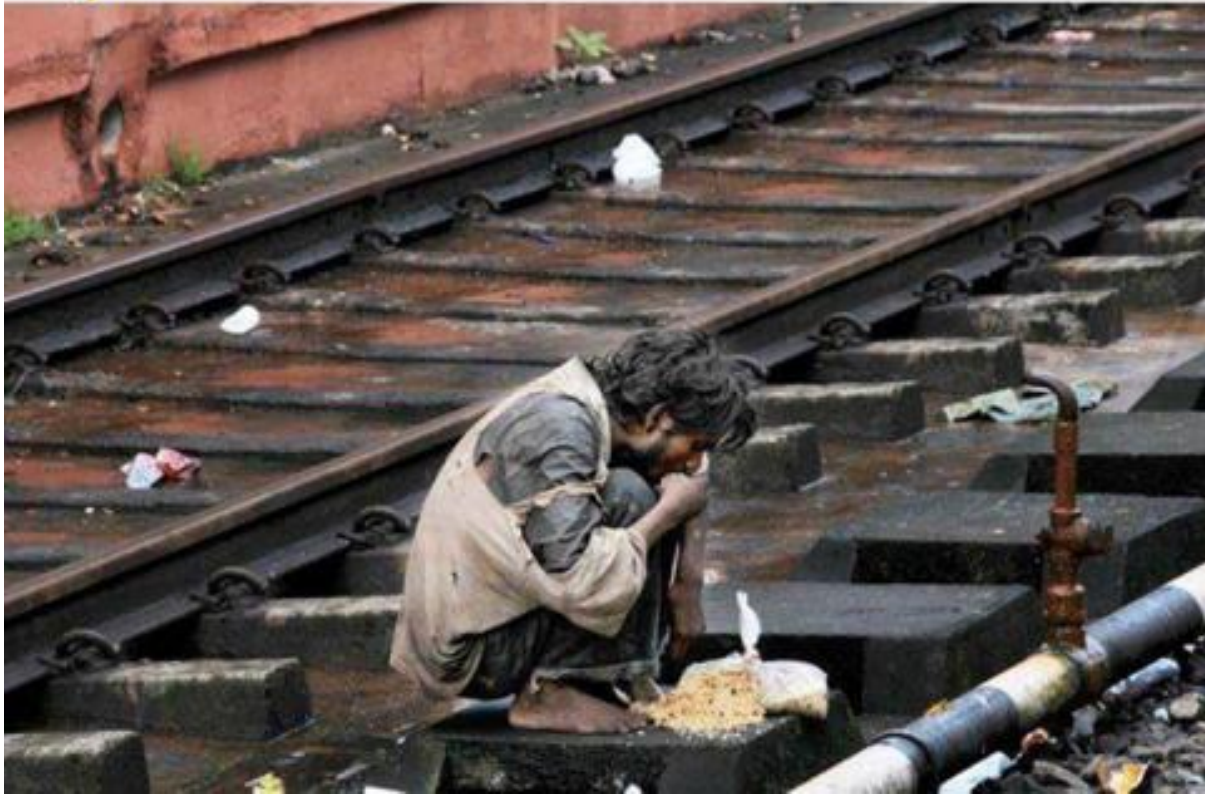
BE SENSIBLE !!!





Think before you WASTE !

VEDIC

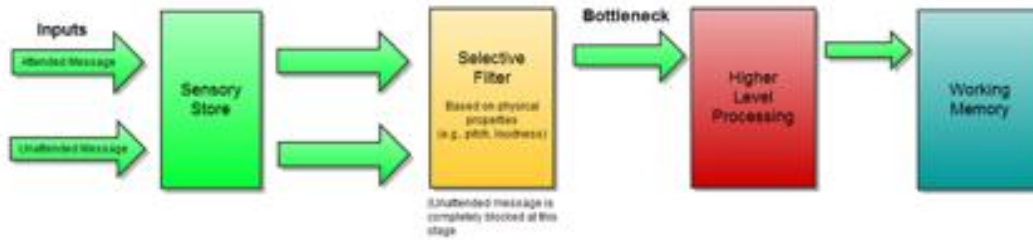


Its far easier to shape good behavior
than is to manage bad behavior

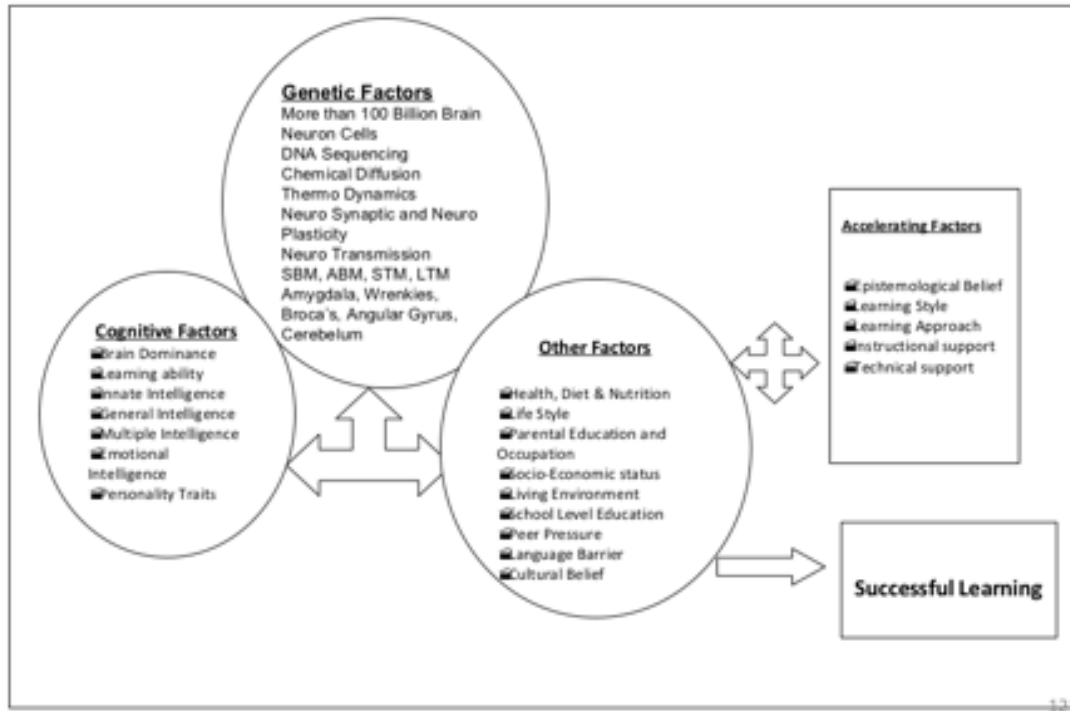
- Skinner Model of Discipline
 - Human behavior can be shaped along desired lines by means of the systematic application of reinforcement.
- William Rogers Discipline Model
- Redl & Wattenberg Discipline Model
- Kounin Model of Discipline
- Jones Model of Discipline
- Glasser Model of Discipline
- Ginott Model of Discipline
- **Dreiker's Model of Discipline**
- Canter Model of Discipline

Role-Play on the Theories in Discipline

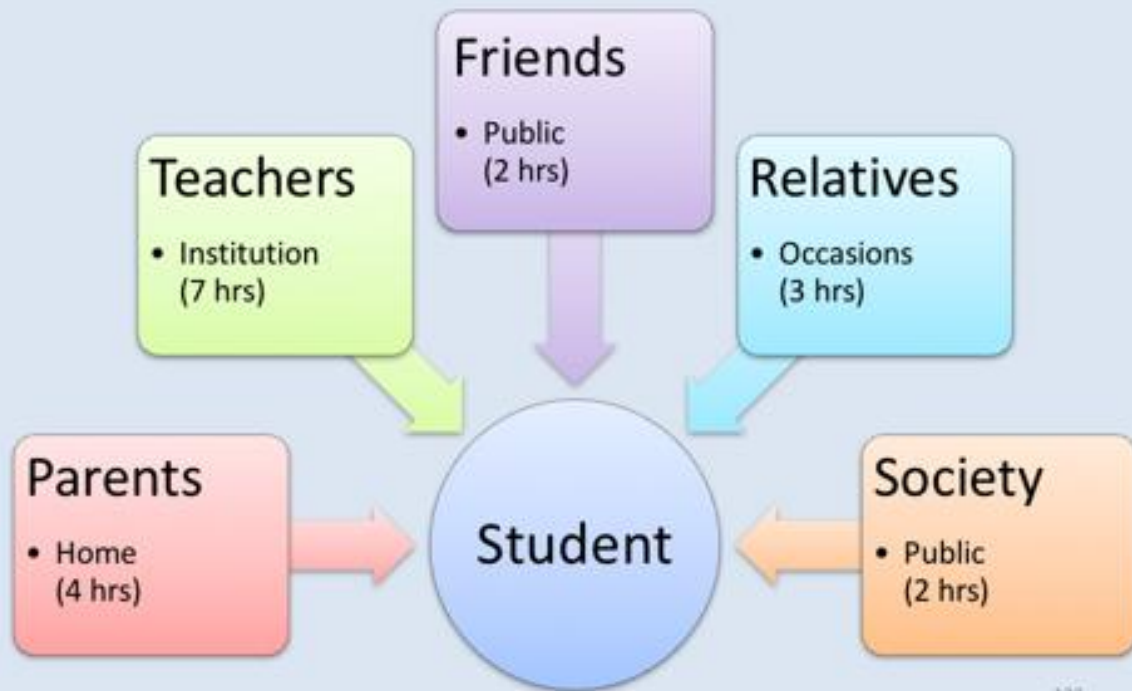
Broadbent's Filter Model



Factors Influencing the Learning Process



Influence on Students



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Handling Common Behavioral Situations

Diagnosis				Remediation	
Goal of Student	What 'Behavior' is Saying	Teachers/Parents 'Emotional Response'	Reaction by Student to Teachers/Parents Mistaken Responses & Measures	Effective Immediate Response	Remediating Measures
	1	2	3	5	6
Seeking undue ATTENTION	I only count in this world when I keep you busy with me	Annoyed "Pain in the neck"	Increased frequency	Ignoring the behavior	Giving them due attention (i.e. encouragement) when it is not being sought
Seeking undue POWER	Active power: I only count in this world when I show you I am boss or when I make you ... Passive power: I only count in this world when I show you, you can't make me ...	Angry, Challenged, Frustrated, Defeated, Retaliatory	Increased intensity	"Take your sail out of their wind"	1. Listen first 2. Always offer a choice 3. Negotiate reasonable limits of time and action
FOR GOALS BELOW THIS LINE, PROFESSIONAL HELP IS REQUIRED					
Seeking REVENGE	"Two eyes for an eye"	Hurt (emotionally and/or physically)	Bigger and better pain or destruction	Don't show the pain	Approximations towards the goal of encouragement
Seeking to display INADEQUACY	Leave me alone	Feel like throwing up your hands and saying "there is nothing to be done"	"Turtling" i.e. becoming more withdrawn	Don't give up and show them you won't give up	Gentle approximations towards the goal of encouragement



Can we identify our **Institutes** *GOOD Behavioral Practices*

VEDIC

- What does our Institute request Parents ?
- What does our Parents request the Institute ?

- What does our Institute request Students ?
- What does our Students request the Institute ?

- What does our Institutional authority request teachers ?
- What does our teachers request Institutional authority ?

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Can we mark our discipline ??

Generations and their Characteristics

What can I do in my Department ?

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My Department

VEDIC

- Vision - Setting Directions
- Mission - Providing path & decision making
- Goals – for Every Semester/Year for 5 Years
- Objectives – SMART

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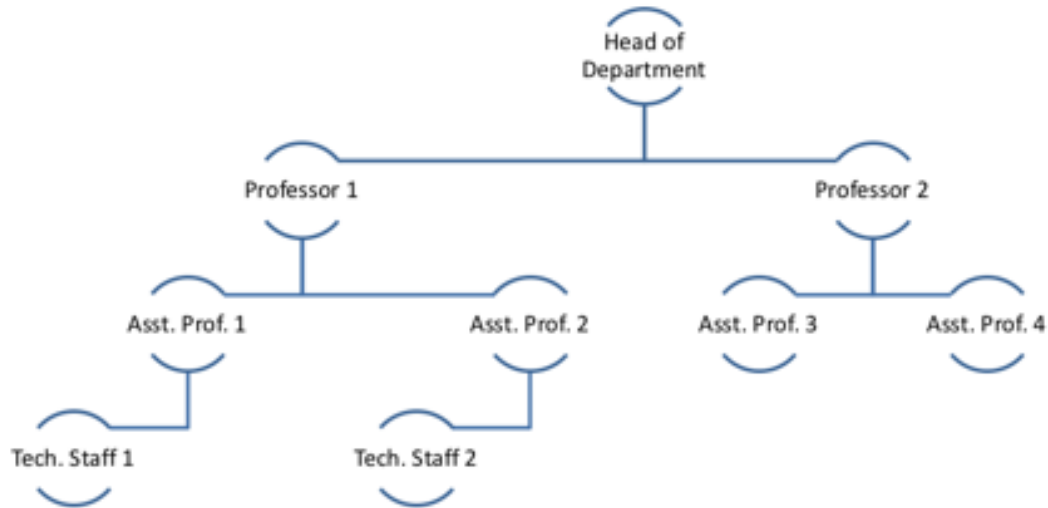


What is our Department's Mission ?

Mechanical:

Electrical:

Department Organization Chart

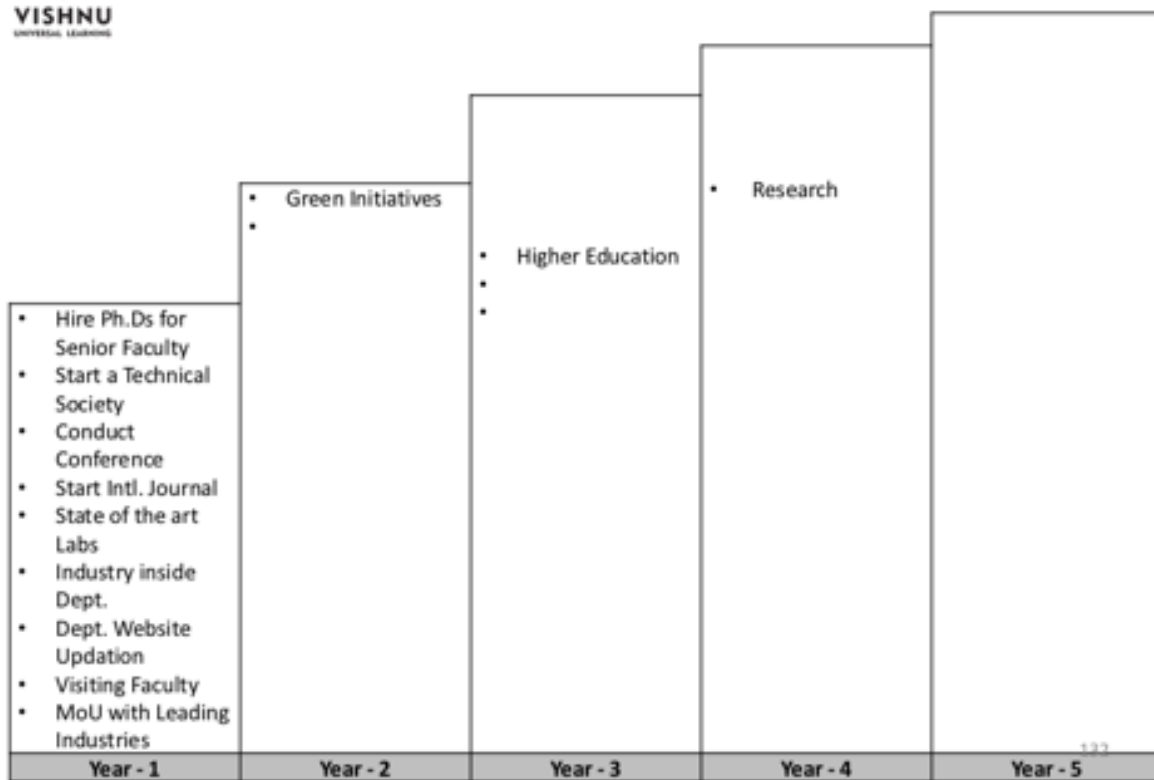


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Can all of us prepare our respective Department's 5 YEAR Plan

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5 – Year Plan for your Department





Faculty Road Map – Fresh M.E VEDIC

<p>Administrative Assistant Professor Bond for 2 Years Apply for MBA</p> <p>Academic Register for Ph.D., 80% Student Results Individual Assign. for stud. Periodic Tests Attend FDP Staff Seminar Course Material Prep. Teaching Aid Prep. Evaluation Pattern Learn Linux & C</p> <p>Research Lab development Identify Domain for Specialization Prof. society member</p>	<p>Administrative Sal. Increment ISO Auditor Staff Advisor for Assoc.</p> <p>Academic 85% Stud. Result Lab In-charge Conduct FDP Class Tutor UG Project Guide New Subject Learn Setup experiments Collect Dig. Book for e-Lib Learn Adv. Linux & C</p> <p>Research Lab Manual Text Book Publication Skill Upgradation Prof. society activity</p>	<p>Administrative Sal. Increment ISO Auditor Staff Advisor for Assoc. Community Dev.</p> <p>Academic 90% Stud. Result Center In-charge Industry training Train Junior Faculty PG Project Guide QP Setter External Examiner</p> <p>Research Enhance Lab Facility Industrial Trg. Organize Conf. Organize Paper Publication Project Leader Project Proposal Prof. society activity</p>	<p>Administrative Associate Professor ISO Lead Auditor Community Dev. Visits Abroad</p> <p>Academic 90% Stud. Result Senior Tutor M.S Guidance Digital Book Pub. for e-Lib Guide Juniors</p> <p>Research Journal Publication Intl. Conf. Organize Project Leader Project Proposal Industry Tie-ups Fund generation Consultancy Entrepreneur dev Professional soc. activity</p>	<p>Administrative Sal. Increment ISO Lead Auditor Modern Office facility</p> <p>Academic 90% Stud. Result Senior Tutor M.S Guidance Guide Juniors</p> <p>Research Reg. for Post-doc Patents Start Industry or Product Dev. Center Journal Publication Industry Tie-ups New Technology Center Other Titles and Responsibilities Intl. Conf. Organize Intl. Journal Entrepreneur develop Professional society activity</p>
1 Year	2 Year	3 Year	4 Year	5 Year

<p>Administrative Professor Modern Office Facility</p> <p>Academic 80% Student Results Individual Assign. for stud. Staff Seminar Attend FDP Evaluation Pattern Learn Linux & C</p> <p>Research Reg. for Post-doc Reg. for D.Sc Journal Publication Patents Guide Ph.D</p>	<p>Administrative Sal. on Performance. Administrative Positions</p> <p>Academic 85% Stud. Result Guide Juniors Learn Adv. Linux & C</p> <p>Research Patents Start Industry or Product Dev. Center Journal Publication Industry Tie-ups Fund generation Consultancy New Technology Center Guide Ph.D</p>	<p>Administrative Dean / Director Community Dev. Visits Abroad</p> <p>Academic 90% Stud. Result Guide Juniors</p> <p>Research Intl. Journal Editor Patents Start Research Center Technology Dev. Technology Transfer Product Dev. for Industries Consultancy New Course Design Fund generation Consultancy Professional soc. activity</p>	<p>Administrative Sal. Increment Director for own industry Community Dev. Visits Abroad</p> <p>Academic 90% Stud. Result Guide Juniors</p> <p>Research Intl. Journal Editor Fund generation Consultancy Entrepreneur Training Incubation Center Professional soc. activity</p>	<p>Administrative Prof. Emeritus Director for own industry Community Development Visits Abroad</p> <p>Academic 90% Stud. Result Guide Juniors</p> <p>Research Promote Industrial growth Incubation Center Industrial Development Consultancy Professional soc. activity</p>
1 Year	2 Year	3 Year	4 Year	5 Year ¹³⁴



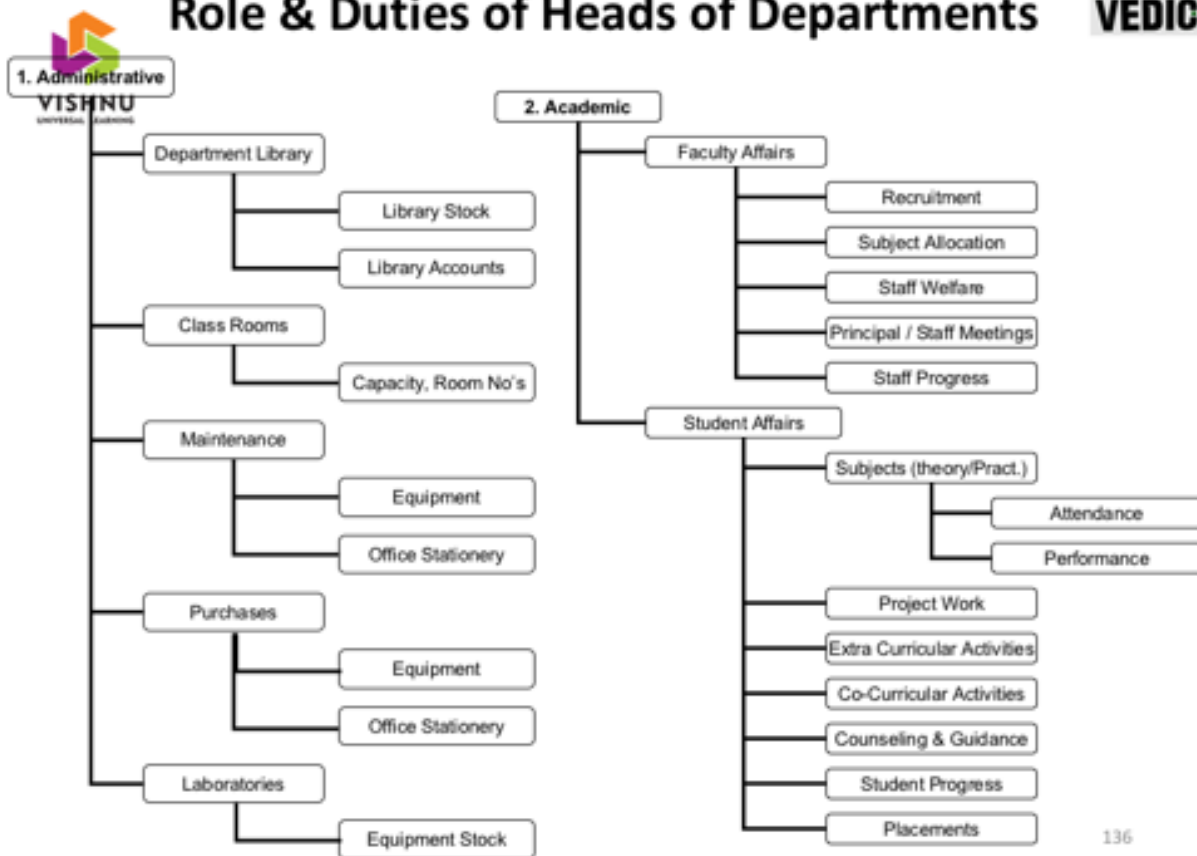
Guidelines for any Student to become a “PROFESSIONAL”

<ul style="list-style-type: none"> ▪ Do a Physics Project ▪ Do a Branch Project ▪ Attend English Conversation Class ▪ Learn Linux ▪ Learn C / C++ / Java ▪ Hobby building ▪ Involve NCC/NSS Activity ▪ Sports 1hr compulsory 	<ul style="list-style-type: none"> ▪ Do a 'Funda' Project ▪ Learn Advanced Linux ▪ Get Software Training ▪ Do a Term Paper ▪ Attend English Conversation Class ▪ Yoga / Fitness ▪ Ethics / Culture ▪ Sports 	<ul style="list-style-type: none"> ▪ Industrial Case Study ▪ Placement Training ▪ GRE / TOEFL / IELTS ▪ GMAT / CAT ▪ National Conf. Paper ▪ Foreign Lang. Class ▪ Domain Specialization ▪ Society Memberships ▪ Term Paper ▪ Yoga / Fitness ▪ Ethics / Culture ▪ Sports 	<ul style="list-style-type: none"> ▪ Soft Skills ▪ Intl. Conf. Paper ▪ Industrial Project ▪ Research Project ▪ Induction Training ▪ Group / Association / Tech. Society Activity ▪ GRE / TOEFL / IELTS ▪ GMAT / CAT ▪ Visits Abroad ▪ Train Junior Studs. ▪ IEEE Stud. Chapter ▪ Foreign Lang. Class ▪ Yoga / Fitness ▪ Ethics / Culture ▪ Sports
1 Year	2 Year	3 Year	4 Year

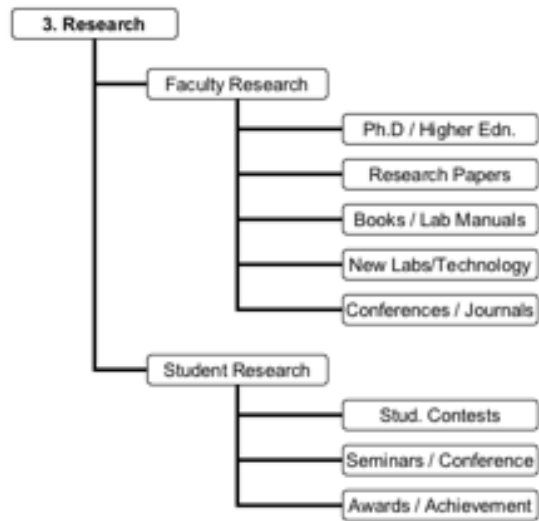
135

Role & Duties of Heads of Departments

VEDIC



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Creating “Positive Outlook”
and achieving “SUCCESS”
in our day to day lives...

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- There are many great books one could read to become successful
- But, do we have the time ?
- "it is not about just knowing from books – it is about doing"
- It is very difficult to pinpoint what success means to every individual
- Because, we are all Unique !
- However, there are certain factors that are absolutely essential to succeed
- We will learn those.....

"Success requires a combination of many different elements that must come together in a specific way."



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1. Removing **limiting beliefs** that are preventing us from moving forward.
2. Adopting **new habits** and routines that will help boost our productivity.
3. Identifying and making the best use of the **resources** we have.
4. Recognizing and utilizing our **strengths** and the skills we will need to achieve our objectives.
5. Taking charge of our **emotions** in a proactive manner — making them work for us rather than against us.
6. Finding ways to **motivate yourself** to take the necessary actions to achieve our goals.
7. Setting goals and objectives consistently in the right way to help keep us on track.
8. Cultivating a **mindset** that is naturally aligned with the outcomes we want to achieve.

Can we record the “8 - Pillars of Success” ?



Can we record the “1st Pillar – My BELIEFS” ?

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Limiting (Negative) Beliefs

- Our beliefs are so powerful that they blind us to other perspectives of reality
- Identify our negative beliefs



Beliefs

VEDIC

Positive Beliefs

- Overcome our negative beliefs by:
 - Questioning their **validity**
 - Transform our **language**
 - Control our **reactions**



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Cultivating “Empowering Beliefs” **VEDIC**

I am in charge of my life and circumstances.

Failure strengthens and empowers me.

Setbacks are only temporary.

I don't need other people's approval to succeed.

I already have all I need to succeed within me.

Every minute is another chance to turn it all around.

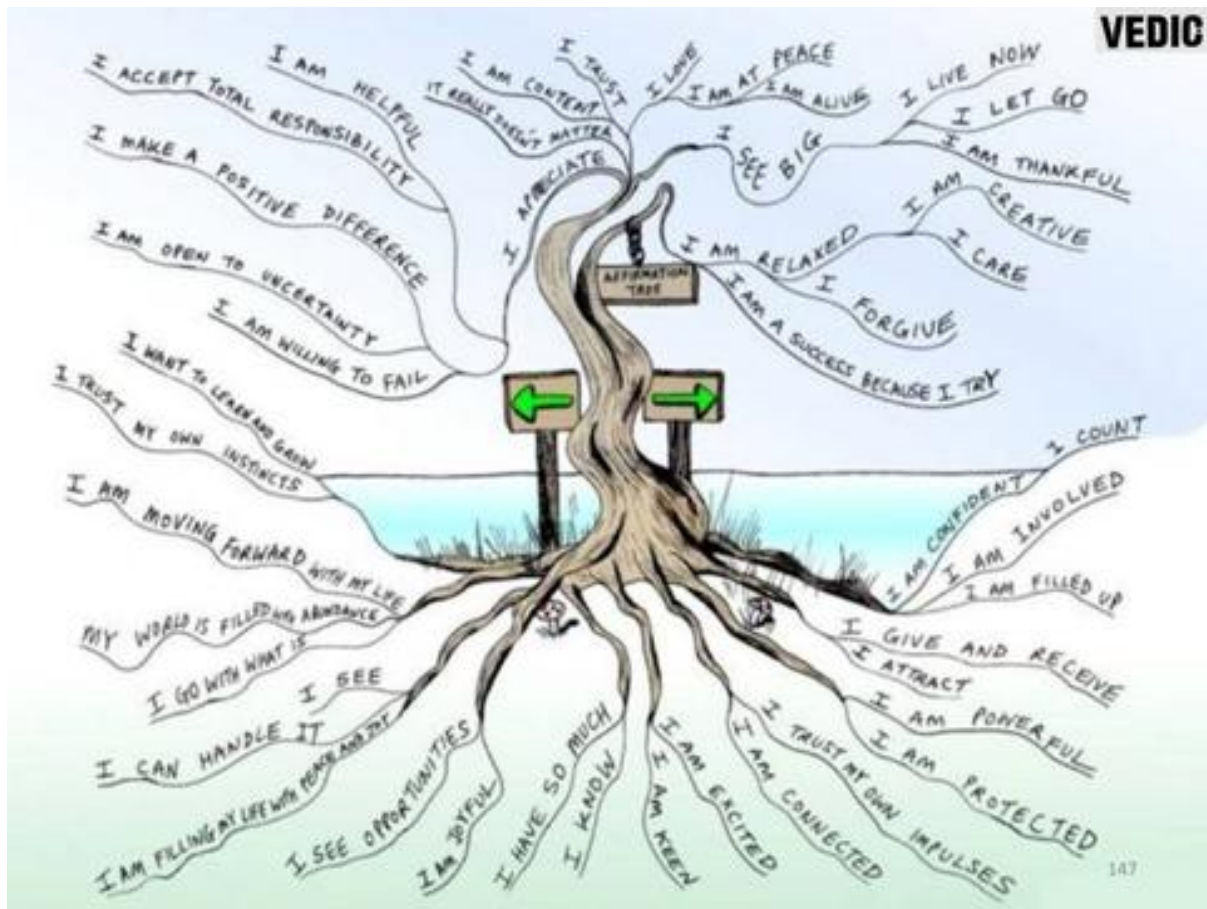
I can make tomorrow better than today.

Every mistake is an opportunity to learn and grow.

There's a lot of opportunity around me, always!

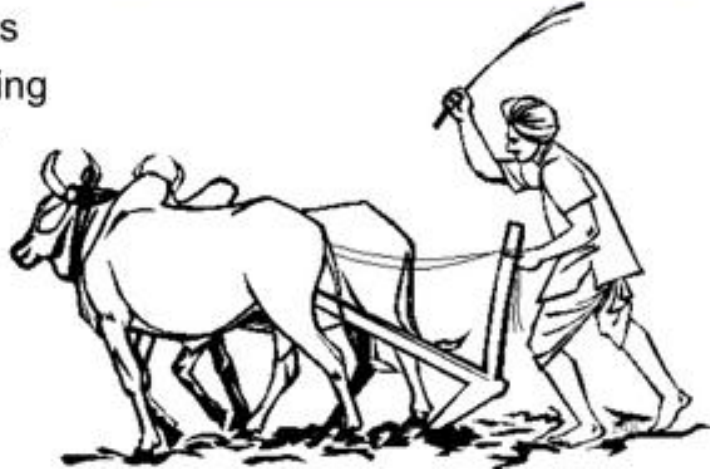
Hard work and perseverance always pays off in the end.

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- Which of my daily habits are helpful and productive?
- Which of my daily habits prevent me from achieving what I want to become?

“ Almost everything we do results from a habit that we have cultivated over a lifetime”



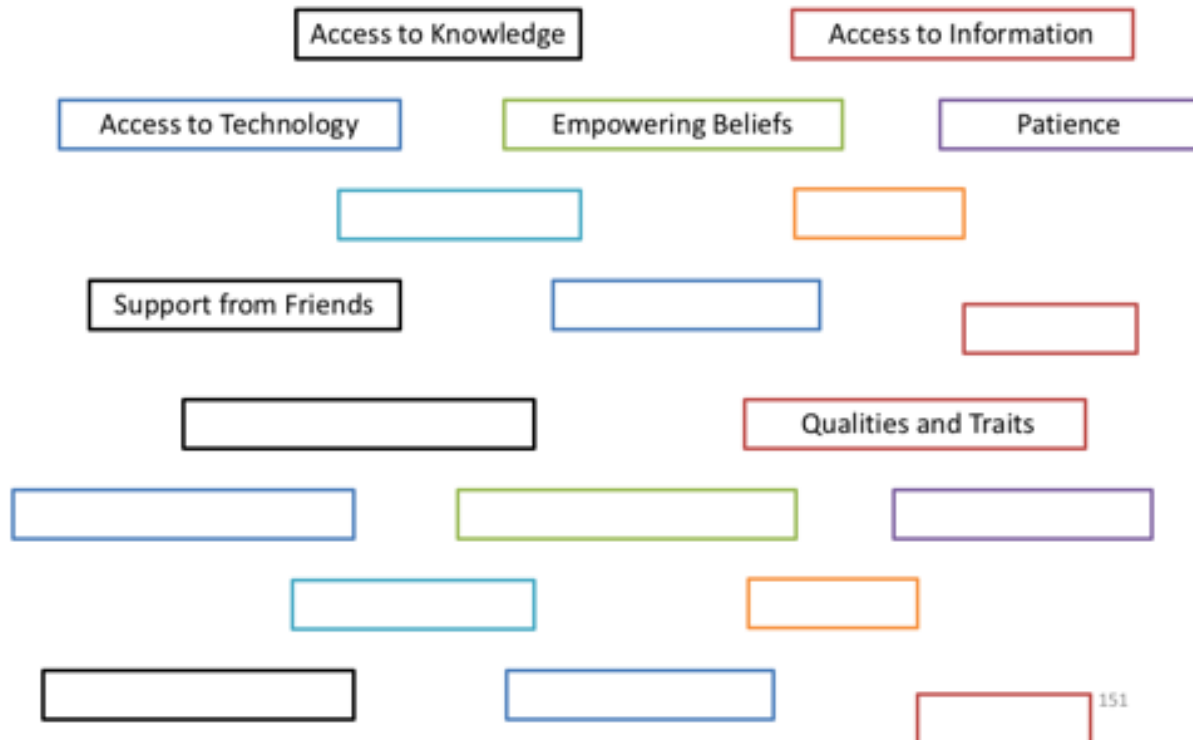
Empowering Habits



- What specific resources do I have for each category ?
- What resources might be missing that could help me achieve my desired outcomes?
- How could I go about acquiring these missing resources?
- How can I make the best use of the resources I have, to achieve my goals and objectives?

“A resource is anything we can make use of to help achieve our desired outcomes”





- What specific skills do I currently have that will help me achieve my desired outcomes?
- What critical new skills must I master to achieve my goals and objectives?
- How will I go about developing these skills?
- Where must I begin?



152

- No matter what your goals, there are certain skills that are absolutely essential and necessary.



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Pillar – 5 : Emotions

VEDIC

- emotions can either *make us* or *break us*.

- Take control of your emotional responses and you will soon take charge of your life.

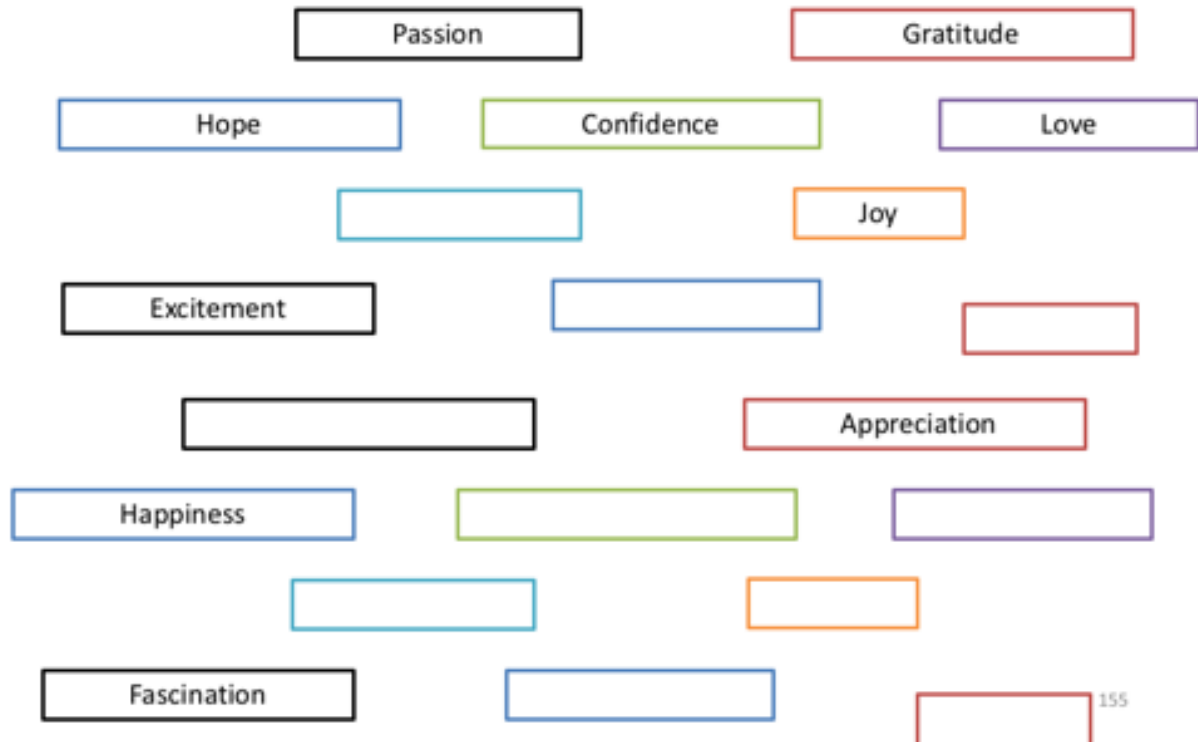
“Emotions are nothing more than our interpretations of reality.

Things don't just happen to us.

We rather interpret what happens to us in our own unique way and therefore experience a corresponding emotion”

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Empowering Emotions

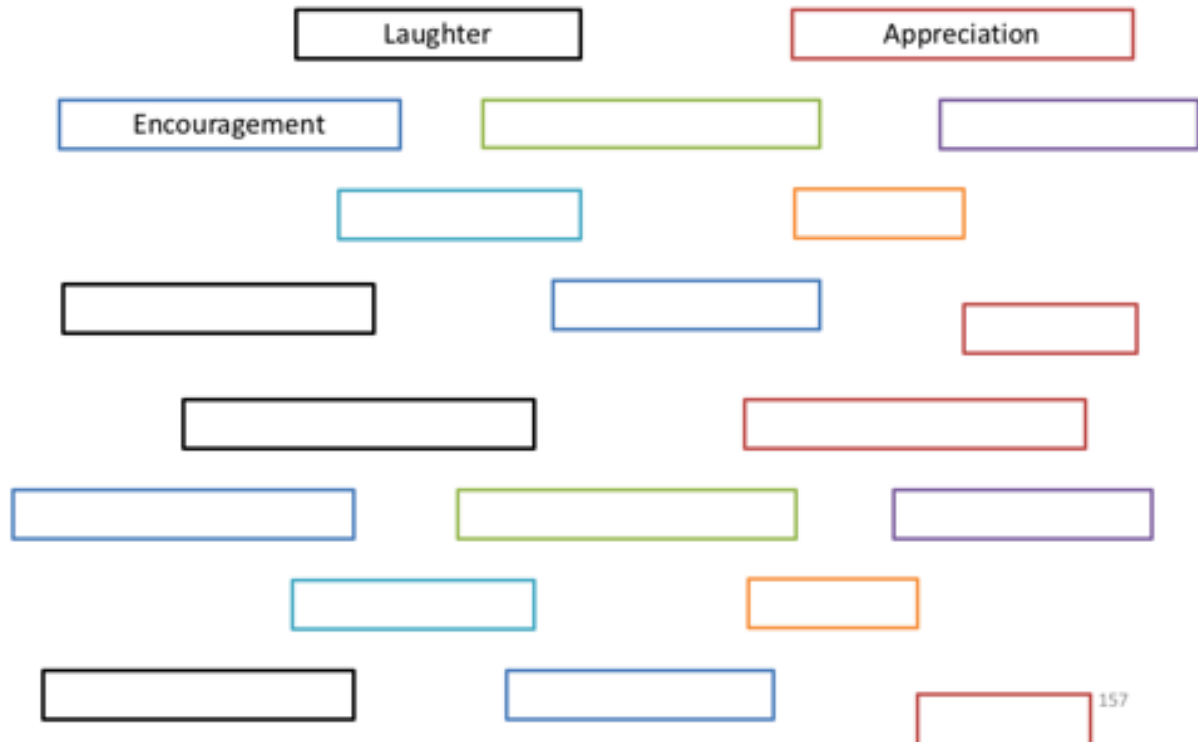


Pillar – 6 : Motivation

- In order to achieve sustained levels of motivation we need to cultivate the following qualities:
 - Responsibility
 - Determination
 - Discipline
 - Optimism
 - Enthusiasm

“Motivation is an absolute necessity for long-term success. With it, the journey is much more pleasant and fun”

Enhancing Motivation





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Pillar – 7 : Goal Setting – Time Lines **VEDIC**

- Goals will stretch our thinking and motivate us to keep moving forward despite any problems or obstacles that may arise along the way.
- goals are focused on daily and weekly actions that we must take in order to attain *our Purposeful Goals*.

“Goal setting of some kind is absolutely necessary as it will help you focus on the most important things that are required to achieve your desired outcomes”



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Goal Criterion

My Goals are Specific

I have laid out exactly what I want to achieve specifically and accurately taking all factors into consideration.

My Goals are Challenging

They stretch my capabilities, skills and talents.

My Goals are Attainable

They are challenging, however given my resources and capabilities they are most definitely within my reach.

My Goals are Realistic

The timeframe I have stipulated for the achievement of this goal is realistic given my resources and capabilities.

My Goals are Timed

They have a definite start and end date.

My Goals are Believable

I actually believe that I can achieve them. This suggests that my goals are challenging yet attainable at the same time.

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Goal Criterion

My Goals are Ecological

The achievement of these goals does not interfere with other goals or other areas of my life in a negative way.

My Goals are Written

I have clearly written down my goals on paper where I can refer to them on a daily basis.

My Goals are Optimistic

They focus me on what I want to do, be, have and achieve.

My Goals are Measurable

I can consistently measure my progress and journey towards the achievement of my goals.

My Goals are Focused

They are directed upon one main clear objective.

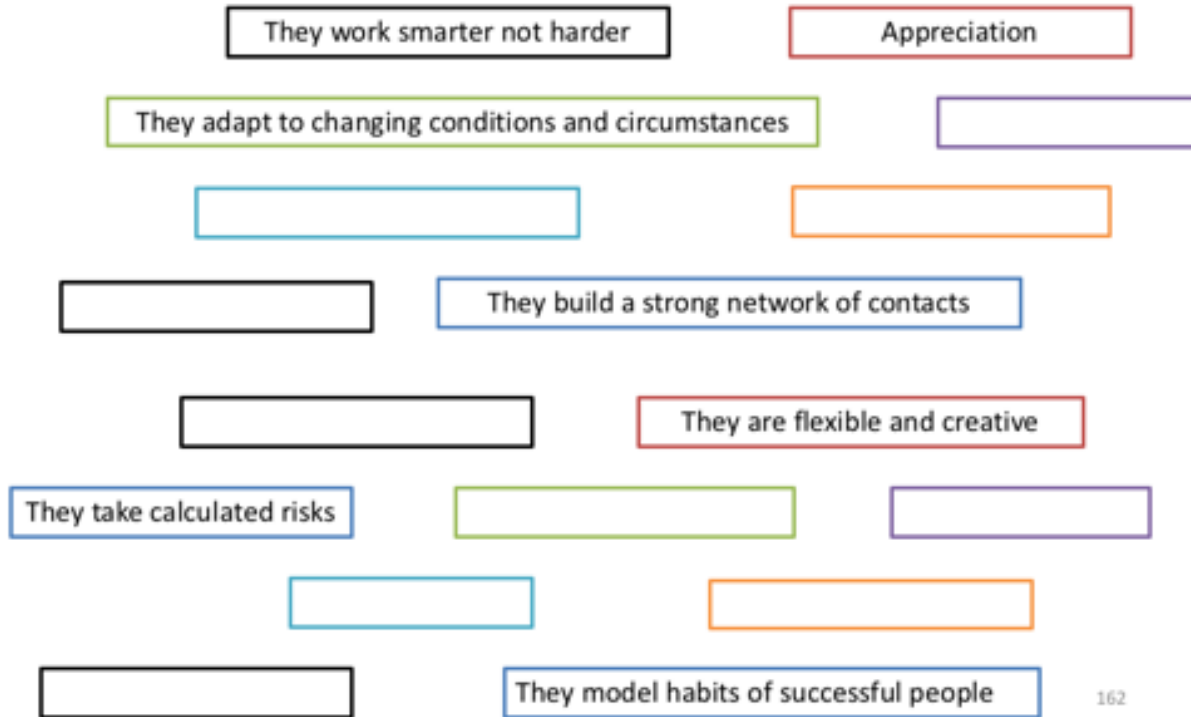


Pillar – 8 : Mindset

- Attracting good fortune into your life is not so much based on luck but rather it is based on science— psychological science.

“The people who have an incredible amount of luck only seem lucky because they do the right things at the right time in the right way.”

Why are people lucky ?



Basic Algebra

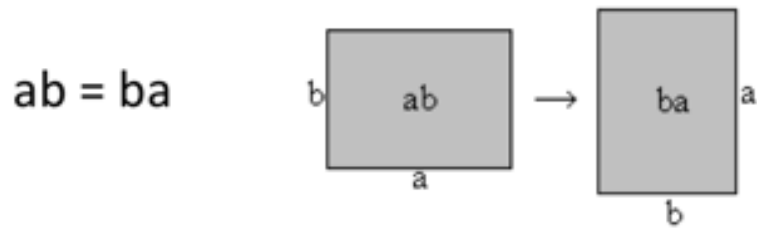
Define Algebra:

“doing computations similar to that of arithmetic with
non-numerical mathematical objects”

168

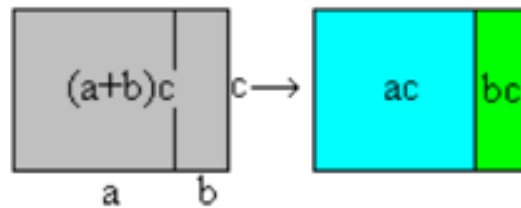
Basic Algebraic Laws

1. Commutative law of multiplication



2. Distributive law of multiplication

$$(a+b)c = ac + bc$$

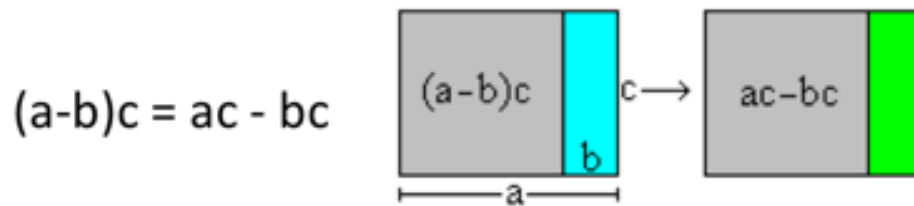


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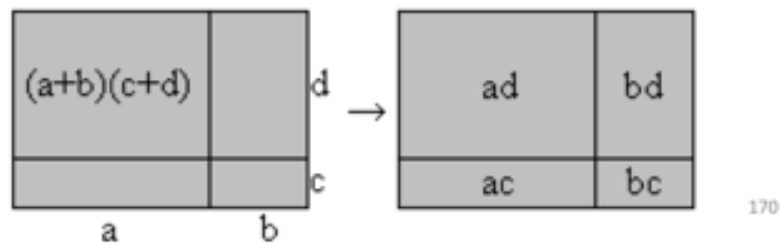
Basic Algebraic Laws

3. Product of a difference and a number



4. Product of two sums

$$(a+b)(c+d) = ac + ad + bc + bd$$

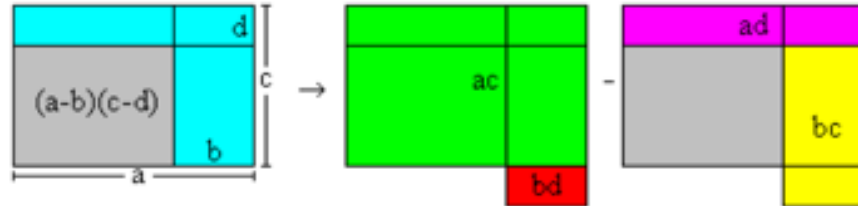




Basic Algebraic Laws

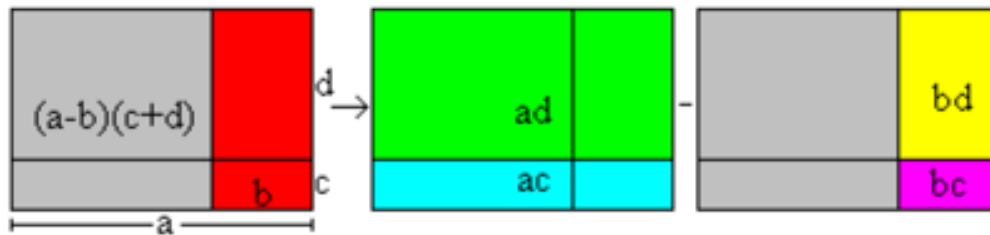
5. Product of two differences

$$(a-b)(c-d) = ac + bd - ad - bc$$



6. Product of a sum and a difference

$$(a-b)(c+d) = ac + ad - bc - bd$$



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In the LAB

DAY - 1

173

1. Thoughts

<http://www.thinkwatson.com/mythinkingstyles-start>

174



2. Intelligences Dr.Howard Gardner

<http://www.literacynet.org/mi/assessment/findyourstrengths.html>

175

3. Learning Style

Search Google : “Index of Learning Styles Questionnaire”

www.engr.ncsu.edu/learningstyles/ilsweb.html

176



4. Personality

Paul Costa & Robert McCrea

<http://www.similarminds.com/big-5-word-pair.html>

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Search in Google.....

- Pedagogy Vs Andragogy (PDF)
- Blooms Taxonomy psychomotor domain (Images)
/// affective, cognitive
- Dale's Cone of Learning (Images)
- Kolb learning cycle (Images)
- Instructional System Design (Google Images)
- Robert Gagne Nine Events of Instruction (Images)
- Effective use of Learning Objectives (PDF file)
- Kirkpatrick Learning Evaluation (Google Images)
- Teaching Engineering (Phillip Wankat)
- Arvind Gupta Toys - Toys from Thrash

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Thank You

Querries ??

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Thank You

Preach only if you Practice !

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Workshop on Scientific Educational Practices

(Organized for faculty members of the Institutions under Sri Vishnu Educational Society)
April 6th to 8th 2017

Participants Feedback

Number of Respondents: 27

VEDIC- SEP Workshop, April 6 th to 8 th 2017	Scientific Educational Practices- Ms. D. Lakshmi		
	High	Average	Low
Training Purpose was Clear	27	0	0
Training experience is useful to my classroom practices	27	0	0
I Learnt about learner-centric approach	26	1	0
The information in this session was new and helpful to me	25	2	0
This workshop will improve my teaching still better	27	0	0
The content was organized and easy to follow	25	2	0
Doubts were cleared	25	2	0
Materials are relevant and Useful	25	2	0
Trainer was helpful	26	1	0
Positive Learning environment	26	1	0

1	Brain and its stimulus was interesting
2	I like the team activities
3	The environment is very good
4	Now onwards I hope to change my practices
5	Good explanation by the trainers about teaching & learning practices, time maintenance and exercise practices
6	Sep is good for our career
7	I like learning process and group activities
8	I will try to change my way of teaching style
9	Sep is very good. I am happy to participate in VEDIC
10	I like the topics how to deal with students according to their behavior and what measures we have to take while teaching
11	I am very happy with this new environment, it was very helpful to me what are teaching methods and how can mould myself to be motivational
12	It is good to improve myself

13	I like the way of teaching, teamwork, new techniques
14	I like the learning methods
15	I like teaching , learning and assessment techniques
16	It is better to give awareness program on SEP for parents of our students.
17	We learnt different teaching methods
18	The SEP training was very helpful to me to clarify the teaching skills
19	I will use cognitive load theory
20	I will concentrate more on student learning approach
21	Learning through activities, grouping members from different institutions and allowing each other to discuss what is better
22	I liked the actual meaning of teaching-learning. Ways for learner-centric approach
23	I will prepare proper session plan and will implement learner-centric
24	Hospitality is very nice
25	Teaching learning practices and taxonomy used methodologies, activities and brain learning
26	I will be greatly thankful to SVES & Trainers to awaken me towards learner centric approach
27	I like learning style and psychometric assessments
28	It is very useful for a teacher to make his/her teaching as an effective sessions always
29	I will change my lecture delivery, question paper setting using Bloom's taxonomy and assignment conduction method
30	I will follow learner centric approach
31	SEP makes a path to positive impact on teaching learning process
32	We want workshop for how to manage more works without feeling pressure
33	Different concepts, so for now we didn't know about teaching and learning
34	I make active based education
35	In this section of SEP everyone participated actively
36	Thank you for providing us with SEP. lot of valuable information is shared. We are trained for positive learning environment
37	SEP is very well advanced program
38	The topics that were taught in the training will somehow help to improve the teaching methodologies
39	Getting to know new forms of learning assessment and meeting new people
40	Good environment nice being a student again wish to attend again
41	Sep is constructive based and procedural process

SEP-BVRC FACULTY LIST

2 messages

BHASKARA MURTHY VEERUBHOTLA <murthyvb@gmail.com> Fri, Dec 2, 2016 at 10:16 AM
To: "Ch. Srinivasa Rao" <srinivasarao.ch@srivishnu.edu.in>, "A. Sesha Madhuri" <seshamadhuri.a@srivishnu.edu.in>, K S P Varma <varma.ksp@bvrice.edu.in>, Chitta venkata srinivas <drsvchitta@gmail.com>, irkbvrice <irkbvrice@gmail.com>

Sir/Madam,

I request you to consider the details of faculty who are attending SEP workshop in this month. The SEP Mission copy is provided to them.

with regards

V.Bhaskara Murthy
Assoc. Professor,
Department of MCA
B.V. Raju College,
Vishnupur,
Bhimavaram - 534 202.
W.G.Dt. cell :9848895266



SEP_BVRC_LIST.xlsx
11K

BHASKARA MURTHY VEERUBHOTLA <murthyvb@gmail.com> Mon, Dec 5, 2016 at 11:45 PM
To: "Ch. Srinivasa Rao" <srinivasarao.ch@srivishnu.edu.in>, "A. Sesha Madhuri" <seshamadhuri.a@srivishnu.edu.in>, K S P Varma <varma.ksp@bvrice.edu.in>, Chitta venkata srinivas <drsvchitta@gmail.com>, irkbvrice <irkbvrice@gmail.com>

sir/madam,

Ms. K L Malleswari,, Lecturer in Chemistry is substituted by Mr. N.V.S. Krishna Reddy, cellno 9951855125, email:redy.1341A@gmail.com.

Due to some personal problem expressed by . K L Malleswari,, Please note the change for 12.12.2016 - 14.12.2016 Scientific Educational Practices

V.Bhaskara Murthy
Assoc. Professor,
Department of MCA
B.V. Raju College,
Vishnupur,
Bhimavaram - 534 202.
W.G.Dt. cell :9848895266

[Quoted text hidden]

Interactive Techniques

Adapted in part from:

Thomas A. Angelo/K. Patricia Cross, *Classroom Assessment Techniques*. 2nd Edition. Jossey-Bass: San Francisco, 1993.

Alison Morrison-Shetlar/Mary Marwitz, *Teaching Creatively: Ideas in Action*. Outernet: Eden Prairie, 2001.

Silberman, Mel. *Active Learning: 101 Strategies to Teach Any Subject*. Allyn and Bacon: Boston, 1996.

VanGundy, Arthur. *101 Activities for Teaching Creativity and Problem Solving*. Pfeiffer: San Francisco, 2005.

Watkins, Ryan. *75 e-Learning Activities: Making Online Learning Interactive*. San Francisco: Pfeiffer, 2005.

These techniques have multiple benefits: the instructor can easily and quickly assess if students have really mastered the material (and plan to dedicate more time to it, if necessary), and the process of measuring student understanding in many cases is also practice for the material—often students do not actually learn the material until asked to make use of it in assessments such as these. Finally, the very nature of these assessments drives interactivity and brings several benefits. Students are revived from their passivity of merely listening to a lecture and instead become attentive and engaged, two prerequisites for effective learning. These techniques are often perceived as “fun”, yet they are frequently more effective than lectures at enabling student learning.

Not all techniques listed here will have universal appeal, with factors such as your teaching style and personality influencing which choices may be right for you.

Instructor Action: Lecture

1. **Picture Prompt** – Show students an image with no explanation, and ask them to identify/explain it, and justify their answers. Or ask students to write about it using terms from lecture, or to name the processes and concepts shown. Also works well as group activity. Do not give the “answer” until they have explored all options first.
2. **Think Break** – Ask a rhetorical question, and then allow 20 seconds for students to think about the problem before you go on to explain. This technique encourages students to take part in the problem-solving process even when discussion isn't feasible. Having students write something down (while you write an answer also) helps assure that they will in fact work on the problem.
3. **Choral Response** – Ask a one-word answer to the class at large; volume of answer will suggest degree of comprehension. Very useful to “drill” new vocabulary words into students.
4. **Instructor Storytelling** – Instructor illustrates a concept, idea, or principle with a real-life application, model, or case-study.

5. **Pass the Pointer** – Place a complex, intricate, or detailed image on the screen and ask for volunteers to temporarily borrow the laser pointer to identify key features or ask questions about items they don't understand.
6. **Empty Outlines** – Distribute a partially completed outline of today's lecture and ask students to fill it in. Useful at start or at end of class.
7. **Classroom Opinion Polls** – Informal hand-raising suffices to test the waters before a controversial subject.
8. **Total Physical Response (TPR)** – Students either stand or sit to indicate their binary answers, such as True/False, to the instructor's questions.
9. **Hand Held Response Cards** – Distribute (or ask students to create) standardized cards that can be held aloft as visual responses to instructor questions. Example: green card for true, red for false. Or hand-write a giant letter on each card to use in multiple choice questions.
10. **Student Polling** – Select some students to travel the room, polling the others on a topic relevant to the course, then report back the results for everyone.
11. **Self-Assessment of Ways of Learning** – Prepare a questionnaire for students that probes what kind of learning style they use, so the course can match visual/aural/tactile learning styles.
12. **Quote Minus One** – Provide a quote relevant to your topic but leave out a crucial word and ask students to guess what it might be: "I cannot forecast to you the action of _____; it is a riddle, wrapped in a mystery, inside an enigma." This engages them quickly in a topic and makes them feel invested.
13. **Everyday Ethical Dilemmas** – Present an abbreviated case study with an ethical dilemma related to the discipline being studied.
14. **Polar Opposites** – Ask the class to examine two written-out versions of a theory (or corollary, law of nature, etc.), where one is incorrect, such as the opposite or a negation of the other. In deciding which is correct, students will have to examine the problem from all angles.
15. **Pop Culture** – Infuse your lectures, case studies, sample word problems for use during class with current events from the pop culture world. Rather than citing statistics for housing construction, for instance, illustrate the same statistical concept you are teaching by inventing statistics about something students gossip about, like how often a certain pop star appears in public without make-up.
16. **Make Them Guess** – Introduce a new subject by asking an intriguing question, something that few will know the answer to (but should interest all of them). Accept blind guessing for a while before giving the answer to build curiosity.
17. **Make It Personal** – Design class activities (or even essays) to address the real lives of the individual students. Instead of asking for reflections on Down's Syndrome, ask for personal stories of neurological problems by a family member or anyone they have ever met.
18. **Read Aloud** – Choose a small text (500 words or less) to read aloud, and ask students to pay particular attention during this phase of lecture. A small text read orally in a larger lecture can focus attention.
19. **Punctuated Lectures** – Ask student to perform five steps: listen, stop, reflect, write, give feedback. Students become self-monitoring listeners.
20. **Word of the Day** – Select an important term and highlight it throughout the class session, working it into as many concepts as possible. Challenge students to do the same in their interactive activities.
21. **Recall, Summarize, Question, Connect, and Comment** – This method of starting each session (or each week) has five steps to reinforce the previous session's material: recall it, summarize it, phrase a remaining question, connect it to the class as a whole, and comment on that class session.
22. **Focused Listing** – List several ideas related to the main focus point. Helpful for starting new topics.
23. **Background Knowledge Probe** – Use questionnaire (multi-choice or short answer) when introducing a new topic.

24. **Goal Ranking and Matching** – Students rank their goals for the class, then instructor combines those with her own list.
25. **Interest/Knowledge/Skills Checklist** – Assesses interest and preparation for the course, and can help adjust teaching agenda.
26. **Documented Problem Solutions** – Keep track of the steps needed to solve specific types of problems. Model a list for students first and then ask them to perform similar steps.

Instructor Action: Lecture (Small Class Size)

27. **Pass the Chalk** – Provide chalk or a soft toy; whoever has it must answer your next question, and they pass it on to the student of their choice.
28. **Quaker Meeting** – Students highlight key passages of the reading, and there is silence (like a Quaker meeting) until someone wants to read his/her out, and others follow. End with brief writing about what they learned from the sentences.
29. **Town Hall Meeting** – Abdicate the front of the room for a student willing to speak out on a controversial subject, and when she is done with her comment, she selects the next speaker from the hands raised.
30. **The Half Class Lecture** – Divide the class in half and provide reading material to one half. Lecture on that same material to the other half of the class. Then, switch the groups and repeat, ending with a recap by pairing up members of opposite groups.
31. **Tournament** – Divide the class into at least two groups and announce a competition for most points on a practice test. Let them study a topic together and then give that quiz, tallying points. After each round, let them study the next topic before quizzing again. The points should be carried over from round to round. The student impulse for competition will focus their engagement onto the material itself.

Student Action: Individual (many of these can be used as partnerwork or groupwork instead; or may escalate to that after some individual effort)

32. **One-Minute Papers** – Students write for one minute on a specific question (which might be generalized to “what was the most important thing you learned today”). Best used at the end of the class session.
33. **Muddiest Point** – Like the Minute Paper, but asks for the “most confusing” point instead. Best used at the end of the class session.
34. **Misconception Check** – Discover class’s preconceptions. Useful for starting new chapters.
35. **Drawing for Understanding** – Students illustrate an abstract concept or idea. Comparing drawings around the room can clear up misconceptions.
36. **Circle the Questions** – Pre-make a handout that has a few dozen likely student questions (make them specific) on your topic for that day and ask students to circle the ones they don’t know the answers to, then turn in the paper.
37. **Ask the Winner** – Ask students to silently solve a problem on the board. After revealing the answer, instruct those who got it right to raise their hands (and keep them raised); then, all other students are to talk to someone with a raised hand to better understand the question and how to solve it next time.
38. **What’s the Principle** – After recognizing the problem, students assess what principle to apply in order to solve it. Helps focus on problem TYPES rather than individual specific problems. Principle(s) should be listed out.
39. **Haiku** – Students write a haiku (a three-line poem: 5-syllables, then 7, then 5) on a given topic or concept, and then share it with others.
40. **Bookmark Notes** - Distribute full-length paper to be used as a bookmark for the current chapter. On it, record prompts and other “reading questions”, and require students to record their notes, observations, and objections while reading onto these bookmarks for collection and discussion in class.
41. **True or False?** – Distribute index cards (one to each student) on which is written a statement. Half of the cards will contain statements that are true, half false. Students

- decide if theirs is one of the true statements or not, using whatever means they desire.
Variation: designate half the room a space for those who think their statements are true, and the other half for false.
42. **“Real-World”** – Have students discuss in class how a topic or concept relates to a real-world application or product. Then have students write about this topic for homework.
Variation: ask them to record their answer on index cards.
 43. **Concept Mapping** – Students write keywords onto sticky notes and then organize them into a flowchart. Could be less structured: students simply draw the connections they make between concepts.
 44. **Advice Letter** – Students write a letter of advice to future students on how to be successful students in that course.
 45. **Tabloid Titles** – Ask students to write a tabloid-style headline that would illustrate the concept currently being discussed. Share and choose the best.
 46. **Bumper Stickers** – Ask students to write a slogan-like bumper sticker to illustrate a particular concept from lecture. Variation: can be used to ask them to sum up the entire course in one sentence.
 47. **One-Sentence Summary** – Summarize the topic into one sentence that incorporates all of who/what/when/where/why/how creatively.
 48. **Directed Paraphrasing** – Students asked to paraphrase part of a lesson for a specific audience (and a specific purpose).
 49. **Word Journal** – First, summarize the entire topic on paper with a single word. Then use a paragraph to explain your word choice.
 50. **Truth Statements** – Either to introduce a topic or check comprehension, ask individuals to list out “It is true that...” statements on the topic being discussed. The ensuing discussion might illustrate how ambiguous knowledge is sometimes.
 51. **Objective Check** – Students write a brief essay in which they evaluate to what extent their work fulfills an assignment’s objectives.
 52. **Opposites** – Instructor lists out one or more concepts, for which students must come up with an antonym, and then defend their choice.
 53. **Student Storytelling** – Students are given assignments that make use of a given concept in relation to something that seems personally relevant (such as requiring the topic to be someone in their family).
 54. **Application to Major** – During last 15 minutes of class, ask students to write a short article about how the point applies to their major.
 55. **Pro and Con Grid** – Students list out the pros and cons for a given subject.
 56. **Harvesting** – After an experience/activity in class, ask students to reflect on “what” they learned, “so what” (why is it important and what are the implications), and “now what” (how to apply it or do things differently).
 57. **Chain Notes** – Instructor pre-distributes index cards and passes around an envelope, on which is written a question relating to the learning environment (i.e., are the group discussions useful?) Students write a very brief answer, drop in their own card, and pass the envelope to the next student.
 58. **Focused Autobiographical Sketches** – Focuses on a single successful learning experience, one relevant to the current course.
 59. **Course-Related Self-Confidence Surveys** – Simple questions that measure how self-confident students are when it comes to a specific skill. Once they become aware they can do it, they focus on it more.
 60. **Profiles of Admirable Individuals** – Students write a brief profile of an individual in a field related to the course. Students assess their own values and learn best practices for this field.
 61. **Memory Matrix** – Identify a key taxonomy and then design a grid that represents those interrelationships. Keep it simple at first. Avoid trivial or ambiguous relationships, which tend to backfire by focusing students on superficial kinds of learning. Although probably most useful in introductory courses, this technique can also be used to help develop basic study skills for students who plan to continue in the field
 62. **Categorizing Grid** – Hand out rectangles divided into cells and a jumbled listing of terms that need to be categorized by row and column.

63. **Defining Features Matrix** – Hand out a simple table where students decide if a defining feature is PRESENT or ABSENT. For instance, they might have to read through several descriptions of theories and decide if each refers to behaviorist or constructivist models of learning.
64. **What/How/Why Outlines** – Write brief notes answering the what / how / why questions when analyzing a message or text.
65. **Approximate Analogies** – Students provide the second half of an analogy (A is to B as X is to Y).
66. **Problem Recognition Tasks** – Offer case studies with different types of problems and ask students to identify the TYPE of problem (which is different from solving it)
67. **Switch it up!** – Ask students to work on one problem for a few minutes and intentionally move to a second problem without debriefing the first one, then solve the second one and only then return to the first one for more work. A carefully chosen second problem can shed light on the first problem, but this also works well if the problems are not directly related to each other.
68. **Reading Rating Sheets** – Students fill out a ratings sheet on the course readings, on how clear, useful, and interesting it was.
69. **Assignment Assessments** – Students give feedback on their homework assignments, and evaluate them as learning tools.
70. **Exam Evaluations** – Students explain what they are learning from exams, and evaluate the fairness, usefulness, and quality of tests.
71. **Group-Work Evaluations** – Questionnaires asking how effective groupwork has been in the class.
72. **Teacher-Designed Feedback Forms** – Rather than use standardized evaluation forms, teachers create ones tailored for their needs and their classes. Especially useful midway through the term.
73. **Writing Fables** – Students write an animal fable (or at least sketch its outline) that will lead to a one-sentence moral matching the current concept discussed in class. May be done verbally instead.

Student Action: Pairs

74. **Think-Pair-Share** – Students share and compare possible answers to a question with a partner before addressing the larger class.
75. **Pair-Share-Repeat** – After a pair-share experience, ask students to find a new partner and debrief the wisdom of the *old* partnership to this *new* partner.
76. **Teacher and Student** - Individually brainstorm the main points of the last homework, then assign roles of teacher and student to pairs. The teacher's job is to sketch the main points, while the student's job is to cross off points on his list as they are mentioned, but come up with 2-3 ones missed by the teacher.
77. **Wisdom of Another** – After any individual brainstorm or creative activity, partner students up to share their results. Then, call for volunteers of students who found their partner's work to be interesting or exemplary. Students are sometimes more willing to share in plenary the work of fellow students than their own work.
78. **Forced Debate** – Students debate in pairs, but must defend the opposite side of their personal opinion. Variation: half the class take one position, half the other. They line up and face each other. Each student may only speak once, so that all students on both sides can engage the issue.
79. **Optimist/Pessimist** – In pairs, students take opposite emotional sides of a conversation. This technique can be applied to case studies and problem solving as well.
80. **Peer Review Writing Task** – To assist students with a writing assignments, encourage them to exchange drafts with a partner. The partner reads the essay and writes a three-paragraph response: the first paragraph outlines the strengths of the essay, the second paragraph discusses the essay's problems, and the third paragraph is a description of what the partner would focus on in revision, if it were her essay.
81. **Invented Dialogues** – Students weave together real quotes from primary sources, or invent ones to fit the speaker and context.

82. **My Christmas Gift** – Students mentally select one of their recent gifts as related to or emblematic of a concept given in class, and must tell their partners how this gift relates to the concept. The one with a closer connection wins.
83. **Psychoanalysis** – Students get into pairs and interview one another about a recent learning unit. The focus, however, is upon analysis of the material rather than rote memorization. Sample Interview Questions: Can you describe to me the topic that you would like to analyze today? What were your attitudes/beliefs before this topic? How did your attitudes/beliefs change after learning about this topic? How will/have your actions/decisions altered based on your learning of this topic? How have your perceptions of others/events changed?

Student Action: Groups

84. **Jigsaw (Group Experts)** – Give each group a different topic. Re-mix groups with one planted “expert” on each topic, who now has to teach his new group.
85. **Board Rotation** – Assign groups of students to each of the boards you have set up in the room (four or more works best), and assign one topic/question per board. After each group writes an answer, they rotate to the next board and write their answer below the first, and so on around the room.
86. **Pick the Winner** – Divide the class into groups and have all groups work on the same problem and record an answer/strategy on paper. Then, ask groups to switch with a nearby group, and evaluate *their* answer. After a few minutes, allow each set of groups to merge and ask them to select the better answer from the two choices, which will be presented to the class as a whole.
87. **Layered Cake Discussion** - Every table/group works on the same task for a few minutes, then there’s a plenary debrief for the whole class, and finally repeat with a new topic to be discussed in the groups.
88. **Lecture Reaction** – Divide the class into four groups after a lecture: questioners (must ask two questions related to the material), example givers (provide applications), divergent thinkers (must disagree with some points of the lecture), and agreeers (explain which points they agreed with or found helpful). After discussion, brief the whole class.
89. **Movie Application** – In groups, students discuss examples of movies that made use of a concept or event discussed in class, trying to identify at least one way the movie-makers got it right, and one way they got it wrong.
90. **Student Pictures** – Ask students to bring their own pictures from home to illustrate a specific concept to their working groups.
91. **Definitions and Applications** – In groups, students provide definitions, associations, and applications of concepts discussed in lecture.
92. **TV Commercial** – In groups, students create a 30-second TV commercial for the subject currently being discussed in class. Variation: ask them to act out their commercials.
93. **Blender** – Students silently write a definition or brainstorm an idea for several minutes on paper. Then they form into groups, and two of them read their ideas and integrate elements from each. A third student reads his, and again integration occurs with the previous two, until finally everyone in the group has been integrated (or has attempted integration).
94. **Human Tableau or Class Modeling** – Groups create living scenes (also of inanimate objects) which relate to the classroom concepts or discussions.
95. **Build From Restricted Components** – Provide limited resources (or a discrete list of ideas that must be used) and either literally or figuratively dump them on the table, asking students in groups to construct a solution using only these things (note: may be familiar from the *Apollo 13* movie). If possible, provide red herrings, and ask students to construct a solution using the minimum amount of items possible.
96. **Ranking Alternatives** – Teacher gives a situation, everyone thinks up as many alternative courses of action (or explanations of the situation) as possible. Compile list. In groups, now rank them by preference.

97. **Simulation** – Place the class into a long-term simulation (like as a business) to enable Problem-Based Learning (PBL).
98. **Group Instructional Feedback Technique** – Someone other than the teacher polls groups on what works, what doesn't, and how to fix it, then reports them to the teacher.
99. **Classroom Assessment Quality Circles** – A small group of students forms a “committee” on the quality of teaching and learning, which meets regularly and includes the instructor.
100. **Audio and Videotaped Protocols** – Taping students while they are solving problems assesses the learner's awareness of his own thinking.
101. **Imaginary Show and Tell** – Students pretend they have brought an object relevant to current discussion, and “display” it to the class while talking about its properties.
102. **Six Degrees of “RNA Transcription Errors”** – Like the parlor game “Six Degrees of Kevin Bacon” (in which actors are linked by joint projects), you provide groups with a conceptual start point and challenge them to leap to a given concept in six moves or fewer. One student judge in each group determines if each leap is fair and records the nature of the leaps for reporting back to the class.

Facebook

103. **Replace Discussion Boards** - Create a Facebook “group” (private/invite only) and use the Wall as the class discussion board. Students are notified by home page notification when someone replies to their thread.
104. **Notify Students Quickly** – Posting to Facebook will reach your students much faster than an email, because most of them check Facebook regularly.
105. **Fan Page** - An alternative to a group is a “fan” page, which has the advantage that your “status updates” will show up for students on their Live Feed. Disadvantage: some students turn off Live Feed and only see status updates of their friends.
106. **Direct Facebook Friendship** - Allowing your students to “friend” you will give you unfettered access to them (unless they've set up a special role for you), but more importantly, your status updates will be visible to them on the home page (unless they block you manually). Disadvantage: too much information will be revealed on both sides, unless both you and the students set up “lists” with limited access allowed.

Twitter

107. **Report from the Field** – Students use smart phones to record their observations while witnessing an event/location related to the course of study, capturing more honest and spontaneous reactions
108. **Twitter Clicker Alternative** - In large classes, a hashtag can amalgamate all posts by your students in one place, giving them a free-response place to provide feedback or guess at a right answer. Also useful for brainstorming.
109. **Backchannel Conversations in Large Classes** – unlike a whispered conversation, a Twitter conversation (searchable by agreed-upon hashtag) becomes a group discussion. Students may also help out other students who missed a brief detail during the lecture.
110. **Follow an Expert** – Luminaries in many disciplines, as well as companies and governmental agencies, often publish a Twitter feed. Reading such updates provides a way to stay current.
111. **Tweeted Announcements** - Instead of Blackboard, use Twitter to send out announcements like cancelled classes.
112. **Twitter Pictures and URLs** - Twitpic and other services allows for photo upload to twitter; bit.ly and other “link shorteners” allow for pasting long URLs as short ones.
113. **Student Summaries** - Make one student the “leader” for tweets; she posts the top five important concepts from each session to twitter (one at a time); other students follow her feed and RT for discussion/disagreements
114. **Quick Contact** - Since sharing cell phone numbers is risky, instructors may wish to let students follow them on Twitter and send Direct Messages that way.

115. **Community-Building** - A Twitter group for your specific class creates inclusiveness and belonging.
116. **Twitter Projects** - Tweetworks and other apps can enable student groups to communicate with each other more easily.
117. **Brainstorm** - Small Twitter assignments can yield unexpected brainstorming by students, since it's happening "away" from the LMS.
118. **Twitter Poll** - PollDaddy and other apps enable Twitter to gather interest, information, attitudes, and guesses.
119. **Post Links** - News stories and other websites can be linked via Twitter (services such as bit.ly will shorten URLs).

YouTube

120. **Video Demonstrations** - Using a webcam, record a demonstration relevant to your topic and post it to YouTube.
121. **Student Videos** - Student projects, presentations, or speeches can take the form of video instead of PowerPoint, and uploaded for the class to see.
122. **Closed Eyes Method** - To prevent students at home from "reading" presentations (such as poem recitations) that were supposed to be memorized for YouTube upload, require them to give the performance with their eyes closed.
123. **Interactive Video Quizzes** - Using annotations (text boxes) and making them hyperlinks to other uploaded videos, instructors can construct an on-screen "multiple choice" test leading to differentiated video reactions, depending on how the student answers. Requires filming multiple videos and some editing work.
124. **Movie Clips** - Show brief segments of popular movies to illustrate a point, start a conversation, have students hunt for what the movie gets wrong, etc.
125. **Embed Into PowerPoint** - YouTube videos can be embedded into PPT as long as there is an active Internet connection; create a Shockwave Flash object in the Developer tab, and add the URL for "Movie" in the properties (the URL will need to replace "watch?=v/" with just "/v/"). Alternative: use one-button plugin from [iSpring Free](#).
126. **Shared Account** - Instructor creates a generic YouTube username/account and gives the password to everyone in the class, so student uploads all go to the same place.

Wikis

127. **Group Wiki Projects** - Instead of emailing a document (or PPT) back and forth, student groups can collaborate in real time with a free wiki such as wikispaces.com
128. **Wiki Class Notes** - Offering a class wiki for the optional sharing of lecture notes aids students who miss class, provides a tool for studying, and helps students see the material from more than one perspective.

Blogs

129. **Questions to Students** - Use the blog to "push" questions and discussion prompts to students like you would email, but in a different forum.
130. **Provide Links** - The native HTML nature of the blog makes it easy to give links to news stories and relevant websites.
131. **Substitute for Blackboard Discussion Board** - Students can comment on each post (or previous comment) and engage in a dialogue that is similar to Blackboard, but while out in the Internet in general.
132. **Electronic Role Play** - Students create their own blogs, and write diary-type entries while role-playing as someone central to your content.

Creating Groups

133. **Quick Division** - Divide your class into two roughly equal segments for simultaneous, parallel tasks by invoking their date of birth: "if your birthday falls on an odd-numbered

- day, do task X...if your birthday is even, do task Y.” Other variations include males and females, months of birth, odd or even inches in their height (5’10” vs 5’11”).
134. **Question and Answer Cards** – Make index cards for every student in the class; half with questions about class content; half with the right answers. Shuffle the cards and have students find their appropriate partner by comparing questions and answers on their own cards.
 135. **Telescoping Images** – When you need the class to form new groups, craft sets of index cards that will be grouped together by theme, and randomly pass them out for students to seek the other members of their new groups. Example: one set of four index cards has pictures of Europe on a map, then France, then the Eiffel Tower, then a person wearing a beret (thematically, the images “telescope” from far away to close up, and the students must find others in their particular set of telescoping images).
 136. **Speed Sharing** – Students write definitions, concepts, quiz questions, etc. on index cards and form two concentric circles, facing each other. For thirty seconds (or 60), they share their knowledge with the person opposite them. Then, the outer circle “rotates” so that everyone has a new partner, and the sharing is repeated. This can be done until each student has completed the circuit.
 137. **Trio Rotation** – Group students into threes, and arrange the groups into a large circle. Each team of three works on a problem. Then, each team assigns a 1, 2, and 3 number to each person. The 1’s stay put, but the 2’s rotate clockwise and the 3’s rotate counterclockwise. Newly formed teams then work on a new problem.
 138. **Go to Your Post** – Tape a sign onto opposite sides of the walls with different preferences (different authors, skills, a specific kind of problem to solve, different values) and let students self-select their working group
 139. **Four Corners** – Put up a different topic in each corner of the room and ask students to pick one, write their ideas about it down, then head to “their” corner and discuss opinions with others who also chose this topic.

Icebreakers

140. **Introduce Your Partner’s Non-Obvious Trait** – Students partner up and are tasked with learning one thing about the other person that is not obvious by looking at them. Then, they introduce their partner to the larger class. Instructors can use this time to record a crude seating chart of the students and begin to learn their names.
141. **Scrapbook Selection** – Put students in groups and give each group a big pile of printed photos (best if laminated – maybe different shapes/sizes?) Ask them to choose one as a group that epitomizes their reaction/definition of the topic being discussed, and explain why.
142. **Brush with Fame** – Students relate their closest encounter with someone famous, even if it has to be a story about something that happened to a friend or relative.
143. **Name Game** – Students form circles in groups of 8-10 and one at a time state their name with an alliterative action: “I’m Jumping James!” Optimally, they should perform the action as well. They proceed around the circle, stating names and performing the actions, adding names one at a time, until the last person in the circle will have to say everyone’s name and perform all the actions.
144. **Human Bingo** – Students become acquainted at the start of a semester by performing a scavenger hunt you design as a handout: “find someone who dislikes carrots, someone who owns a German car, someone who has read a book about submarines, etc.”
145. **Line Dance** – Students line up according to their level of agreement on a controversial subject: strong agreement on one side, strong disagreement on the other.
146. **Two Truths and a Lie** – Go around the room and ask each student to relate two true statements and one falsehood about themselves, without giving away which is false.

Games (Useful for Review)

147. **Crossword Puzzle** – Create a crossword puzzle as a handout for students to review terms, definitions, or concepts before a test. Some online websites will automate the puzzle creation.
148. **Jeopardy** – Play jeopardy like the TV show with your students. Requires a fair amount of preparation.
149. **Pictionary** – For important concepts and especially terms, have students play pictionary: one draws images only, the rest must guess the term.
150. **Super-Password** – Also for concepts and terms; one student tries to get his partner to say the key term by circumlocution, and cannot say any of the “forbidden words” on a card prepared ahead of time.
151. **Guess the Password** – The instructor reveals a list of words (esp. nouns) one at a time and at each point, ask students to guess what key term they are related to. The hints become increasingly specific to make the answer more clear.
152. **Twenty Questions** – Assign a person, theory, concept, event, etc to individual students and have the partner ask yes/no questions to guess what the concept is. Also works on a plenary level, with one student fielding the questions from the whole class.
153. **Hollywood Squares** – Choose students to sit as “celebrities” at the front of the class. Variation: allow the celebrities to use books and notes in deciding how to help the contestants.
154. **Scrabble** – Use the chapter (or course) title as the pool of letters from which to make words (e.g., mitochondrial dna) and allow teams to brainstorm as many words as possible from that list, but all words must be relevant to this test. Variation: actually play scrabble on boards afterward.
155. **Who am I?** - Tape a term or name on the back of each student, out of view. Each student then wanders about the room, posing yes/no questions to the other students in an effort to guess the term on his own back.

Interaction Through Homework

156. **Find the Company** – Students search the Internet for a corporation that makes use of concepts/ideas from class, and must defend their choice in the next class session.
157. **Diagnostic Learning Logs** – Students track main points in lecture and a second list of unclear points. They then reflect on and analyze the information and diagnose their weaknesses.
158. **Process Analysis** – Students track the steps they take to finish an assignment and comment on their approaches to it.
159. **Productive Study-Time Logs** – Short records students keep on how long they study for a class; comparison allows those with lesser commitment to see the disparity.
160. **Double-Entry Journals** – Students note first the important ideas from reading, and then respond personally.
161. **Paper or Project Prospectus** – Write a structured plan for a term paper or large project.
162. **Annotated Portfolios** – Student turns in creative work, with student’s explanation of the work in relation to the course content and goals.

Student Questions

163. **Student Questions (Index Cards)** – At the start of the semester, pass out index cards and ask each student to write a question about the class and your expectations. The cards rotate through the room, with each student adding a check-mark if they agree this question is important for them. The teacher learns what the class is most anxious about.
164. **Student Questions (Group-Decided)** – Stop class, group students into fours, ask them to take five minutes to decide on the one question they think is crucial for you to answer right now.
165. **Questions as Homework** – Students write questions before class on 3x5 cards: “What I really wanted to know about mitochondrial DNA but was afraid to ask...”

166. **Student-Generated Test Questions** – Students create likely exam questions and model the answers. Variation: same activity, but with students in teams, taking each others' quizzes.
167. **Minute Paper Shuffle** – Ask students to write a relevant question about the material, using no more than a minute, and collect them all. Shuffle and re-distribute, asking each student to answer his new question. Can be continued a second or third round with the same questions.

Role-Play

168. **Role-Playing** – Assign roles for a concept, students research their parts at home, and they act it out in class. Observers critique and ask questions.
169. **Role Reversal** – Teacher role-plays as the student, asking questions about the content. The students are collectively the teacher, and must answer the questions. Works well as test review/prep.
170. **Jury Trial**. Divide the class into various roles (including witnesses, jury, judge, lawyers, defendant, prosecution, audience) to deliberate on a controversial subject.
171. **Press Conference** – Ask students to role-play as investigative reporters asking questions of you, the expert on the topic. They should seek a point of contradiction or inadequate evidence, hounding you in the process with follow-up questions to all your replies.
172. **Press Conference (Guest Speaker)** – Invite a guest speaker and run the class like a press conference, with a few prepared remarks and then fielding questions from the audience.
173. **Analytic Memo** – Write a one-page analysis of an issue, roleplaying as an employer or client.

Student Presentations

174. **Fishbowl** – A student unpacks her ideas and thoughts on a topic in front of others, who take notes and then write a response. Avoid asking questions.
175. **Impromptu Speeches** – Students generate keywords, drop them into a hat, and self-choose presenters to speak for 30 seconds on each topic.
176. **Anonymous Peer Feedback** – For student presentations or group projects, encourage frank feedback from the observing students by asking them to rip up a page into quarters and dedicating comments to each presenter. Multiple variations are possible in “forcing” particular types of comments (i.e., require two compliments and two instances of constructive feedback). Then, ask students to create a pile of comments for Student X, another pile for Student Y, and so on.
177. **PowerPoint Presentations** – For those teaching in computer-mediated environments, put students into groups of three or four students. Students focus their attention on a chapter or article and present this material to the class using PowerPoint. Have groups conference with you beforehand to outline their presentation strategy and ensure coverage of the material.

Brainstorming

178. **Brainstorming on the Board** – Students call out concepts and terms related to a topic about to be introduced; the instructor writes them on the board. If possible, group them into categories as you record the responses. Works to gauge pre-existing knowledge and focus attention on the subject.
179. **Brainstorming Tree** – While brainstorming on the board, circle the major concepts and perform sub-brainstorms on those specific words; the result will look like a tree blooming outward.
180. **Brainstorming in a Circle** – Group students to discuss an issue together, and then spend a few minutes jotting down individual notes. One person starts a brainstorming list

and passes it to the student to the right, who then adds to the list and passes it along again.

181. **Chalk Talk** – Ask students to go to multiple boards around the room to brainstorm answers to a prompt/assignment, but disallow all talking. Can also be done in groups.

Online Interaction

182. **Online Chat (All-Day)** – For classes meeting at least partially in an online environment, instructors can simulate the benefits gained by a chat-room discussion (more participation from reserved instructors) without requiring everyone to meet in a chat room for a specific length of time. The day begins with a post from the instructor in a discussion board forum. Students respond to the prompt, and continue to check back all day, reading their peers' posts and responding multiple times throughout the day to extend discussion.
183. **Online Chat (Quick)** – To gauge a quick response to a topic or reading assignment, post a question, and then allow students to chat in a synchronous environment for the next 10 minutes on the topic. A quick examination of the chat transcript will reveal a multitude of opinions and directions for further discussion. In online environments, many students can “talk” at once, with less chaotic and more productive results than in a face-to-face environment.
184. **Online Evaluation** – For those teaching in online environments, schedule a time which students can log on anonymously and provide feedback about the course and your teaching. Understand, however, that anonymity online sometimes breeds a more aggressive response than anonymity in print.
185. **Pre-Class Writing** – A few days before your computer-mediated class begins, have students respond in an asynchronous environment to a prompt about this week's topic. Each student should post their response and at least one question for further discussion. During the face-to-face meeting, the instructor can address some of these questions or areas not addressed in the asynchronous forum.
186. **E-Mail Feedback** – Instructor poses questions about his teaching via e-mail; students reply anonymously.



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Ms. P. Manjulatha

Lecturer in Physics

FROM

B.V. Raju College

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Scientific & Educational Practices(SEP)

HELD AT

VEDIC, AZIZ NAGAR, HYDERABAD

BETWEEN

DEC 12-14, 2016

Sivakumar
COURSE CO-ORDINATOR

Star
SENIOR ADVISOR

Shankarajen
DIRECTOR



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INNOVATION CENTER

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Lecturer in Physics

FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON

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Shankarajen

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Lecturer in Physics

FROM

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Star

SENIOR ADVISOR

Shankarajen

DIRECTOR



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VEDIC
VISHNU EDUCATIONAL
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INNOVATION CENTER

THIS IS TO CERTIFY THAT

Mr. B.S. Seshagiri Rao

Lecturer in Electronics

FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON

Scientific & Educational Practices(SEP)

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Sivakumari

COURSE CO-ORDINATOR

slav

SENIOR ADVISOR

Sankarajen

DIRECTOR



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VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT

Mr. N.V.S. Krishna Reddy
Lecturer in Chemistry
FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON
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COURSE CO-ORDINATOR

Star

SENIOR ADVISOR

Shankarajen

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VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT

Ms.K L Malleswari

Lecturer in Chemistry

FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON

Scientific & Educational Practices(SEP)

HELD AT

VEDIC, AZIZ NAGAR, HYDERABAD

BETWEEN

FEB 16-18, 2017

Sivakumar

COURSE CO-ORDINATOR

sfav

SENIOR ADVISOR

Sankarajan

DIRECTOR



CERTIFICATE

VEDIC
VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT

Dr. N. Prudhvi Raju

Lecturer in Chemistry

FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON

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VEDIC, AZIZ NAGAR, HYDERABAD

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Sivakumar

COURSE CO-ORDINATOR

Star

SENIOR ADVISOR

Shankarajen

DIRECTOR



CERTIFICATE

VEDIC

VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT

Ms.P Madhura Subhasini

Lecturer in Mathematics

FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON

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sfar

SENIOR ADVISOR

Shankarajen

DIRECTOR



CERTIFICATE

VEDIC

VISHNU EDUCATIONAL
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INNOVATION CENTER

THIS IS TO CERTIFY THAT

Mr. K. Pavan Kumar

Lecturer in Statistics

FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON

Scientific & Educational Practices(SEP)

HELD AT

VEDIC, AZIZ NAGAR, HYDERABAD

BETWEEN

APR 6-8, 2017

Sivakumar

COURSE CO-ORDINATOR

spav

SENIOR ADVISOR

Shankarajen

DIRECTOR



CERTIFICATE

VEDIC
VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT
Ms.D Sri Devi
Lecturer in Life Sciences
FROM
B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON
Scientific & Educational Practices(SEP)

HELD AT
VEDIC, AZIZ NAGAR, HYDERABAD

BETWEEN
FEB 16-18, 2017

Sivakumar
COURSE CO-ORDINATOR

Star
SENIOR ADVISOR

Srinivasarajan
DIRECTOR



CERTIFICATE

VEDIC
VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT
Ms.R Prameela
Lecturer in Commerce
FROM
B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON
Scientific & Educational Practices(SEP)

HELD AT
VEDIC, AZIZ NAGAR, HYDERABAD

BETWEEN
FEB 16-18, 2017

Sivakumar
COURSE CO-ORDINATOR

slav
SENIOR ADVISOR

Sundarajan
DIRECTOR



CERTIFICATE

VEDIC

VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT

Ms. P. Vanitha

Lecturer in Computer Science

FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON

Scientific & Educational Practices(SEP)

HELD AT

VEDIC, AZIZ NAGAR, HYDERABAD

BETWEEN

DEC 7-9, 2016

Sivakumar

COURSE CO-ORDINATOR

Star

SENIOR ADVISOR

Shankarajen

DIRECTOR



CERTIFICATE

VEDIC
VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT

Ms. D. Roja Rani
Asst. Professor, MCA Dept.
FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON
Scientific & Educational Practices(SEP)

HELD AT

VEDIC, AZIZ NAGAR, HYDERABAD

BETWEEN

FEB 16-18, 2017

Sivakumar

COURSE CO-ORDINATOR

Star

SENIOR ADVISOR

Shankarajen

DIRECTOR



CERTIFICATE

VEDIC
VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT
Ms. A Bhanu Priya
Asst. Professor, MCA Dept.
FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON
Scientific & Educational Practices(SEP)

HELD AT
VEDIC, AZIZ NAGAR, HYDERABAD

BETWEEN
FEB 16-18, 2017

Sivakumari
COURSE CO-ORDINATOR

Star
SENIOR ADVISOR

Shankarajen
DIRECTOR



CERTIFICATE

VEDIC
VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT

Mr. B.Kiran
HOD, Physics & Electronics
FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON

S.E.P. train the trainer

HELD AT

VEDIC, AZIZ NAGAR, HYDERABAD

BETWEEN

Feb 27-Mar 1, 2017

Sivakumar

COURSE CO-ORDINATOR

Star

SENIOR ADVISOR

Shankarajin

DIRECTOR

WORKSHOP ON SCIENTIFIC EDUCATION PRACTICES

Towards achieving excellence in Professional Higher Education

ABOUT THE PROGRAMME

Vision

To empower and nurture scientific teaching-learning practices in faculty members, for achieving excellence in higher education teaching & learning.

Purpose

Teachers of higher professional education have not been aware and updated on the latest scientific theoretical advancements and practices in educational discourse. Hence they find it difficult to impart

knowledge to students and this inability creates disinterest in their profession. Hence it becomes the need of the hour to empower all our teachers with

hands-on training in scientific learning practices for professional higher educational discourse.

This workshop handholds them in a systemic disciplined process.

Objectives

At the end of this workshop, participants would be able to:

- Identify how brain learns
- Use learning theories for delivery
- Design courses using learning models
- Facilitate learning with learning styles
- Assess and Evaluate learning
- Motivate learners using psychology
- Generate positive outlook to learning

Methodology

This hands-on workshop uses Problem based & experiential modes of learning. Participants would experience and introspect their understanding on learning.

Highlights

- Provides a holistic picture of education & research by deriving theory, concepts and practices from Mathematics, Arts, Psychology, Philosophy, Sociology, in addition to Technology and Leadership.
- This workshop gives in-depth analysis of teacher attitudes and behavior to assist them to be fit for their profession.

Develops insights into Pedagogy & its components.

- Assesses thinking styles, intelligences, personality and learning styles.
- Challenges the cultural myths prevailing in teaching-learning, department-development and derives scientific evidence towards awareness for improvement.
- Conceptualize and practice discipline using case studies.

SCIENTIFIC COURSES
OF ENGINEERING
NEEDS TO BE
DESIGNED & TAUGHT
SCIENTIFICALLY

SCHEDULE

Day - 1

Brain and Learning

Learning and its Components

Memory & Intelligence

Knowledge Construction

Day - 2

Pedagogy and its Components

Active Learning

Curricula Analyzing and Planning

Instructional System Design

Day - 3

Assessment and Evaluation

Rationale and Plan of Learning

Technology for Education

Leading in Education

The workshop is designed by:

- Educational Technologists
- Educational Psychologists
- Behavior Psychologist
- Cognitive Specialists
- Neuro-Cognitive Scientists
- Engineering Educators
- Curricula Design Experts

Note:

This workshop session would also include scientific psychometric assessing of thoughts; intelligence, behavior and learning styles of teachers and a detailed report on their personality characteristics would be presented to the Institutional Authorities.

Engineering + Educator = Engineering Educator

"It is easier to learn and perform than living in ignorance"

Androgogy Activities Syllabus

1. Designing course plan (Session topic, outline, objectives, outcome, Book Referred) / Robert Gagne's model, Dale's Cone of Learning, Bloom's Taxonomy , Cognitive Load theory etc.,)
2. Preparing detailed lecture notes

'Essential Elements' to be used in the 'Course Material'

- Prerequisite
- Micro level elements
- Macro level concepts
- Interrelationships
- Applications
- Examples
- Animations
- Online resources – like web pages, portals, mobile apps, video materials etc.
- Worksheets
- Learning Activities (Self Paced, Classroom, Team Work etc.,)
- Learning Assessments (MCQ, True/False, Match the following, Fill ups, Short Answer, File upload (Audio, Video, Pdf, doc etc.,))
- Analogies
- Cognitive Load Theory
- Handouts
- Illustration
- Problems & Solution
- Tools – Weka, R etc.,
- Question Bank (Short Answer, Long Answer and University)
- Resources for Advanced Learning

3. Assessing and understanding the prior knowledge of the students
4. Classroom Dynamics –Cognitive load theory, Learn to Learn Activities
5. Learning Assessments
 - Formative Assessment
 - Summative Assessment
6. Design of Rubrics
7. Provide Closure and Reflection
8. Provide Feedback
9. Mentoring and Counselling
10. Portfolio Creation
11. M-Learning Initiative/e-Learning Initiative
12. Applying psychometric assessments in order to understand the students cognitive strength
13. Conducting experimental research

B.V. RAJU COLLEGE :: VISHNUPUR

6.3.3

2016-17

6 7 E-CONTENT DEVELOPMENT

Venue : VEDIC, AZIZ NAGAR, Moinabad Mandal, Ranga Reddy District, Telangana State

Facilitator: Dr. Lakshmi

SNO	Dates (from-to) (DD-MM-YYYY)	Title of the professional development program organized for teaching staff	No. of Participants
6	DEC 16-17, 2016	E-content Development	2
7	FEB 13, 2017	E-content Development	1

6. E-content Development

DEC 16-17, 2016

Sno	Name of the Faculty	Designation
1	Mr. V. Bhaskara Murthy	Assoc. Professor, MCA Dept.
2	Mr. S.K. Alisha	Sr. Asst. Professor, MCA Dept.

7. E-content Development

FEB 13, 2017

Sno	Name of the Faculty	Designation
1	Mr. A.V. Satyanarayana Raju	Lecturer in Computer Science

**A 2-DAY WORKSHOP ON
CONTENT DEVELOPMENT
AT VEDIC(15-16 DEC 2016**

SUBJECT:

**THEORY OF COMPUTATION/
FORMAL LANGUAGES AND AUTOMATA THEORY**

- A REPORT BY

V. BHASKARA MURTHY

Associate Professor, BVRC, Vishnupur.

G. Mohan Ram

Asst. Professor, SVECW, Vishnupur.

CONTENTS

- 1. SYLLABUS**
- 2. COMPARISON OF SYLLABUS**
- 3. ACTION PLAN**

SYLLABUS:
SHRI VISHNU ENGINEERING COLLEGE FOR WOMEN:: BHIMAVARAM
(AUTONOMOUS)
THEORY OF COMPUTATION

UNIT I:

Objectives: Analysis of Finite state machine, its representation and automata

Fundamentals of Automata: Computation, Finite State Machine, Components of Finite State Automata, Elements of Finite State System, Mathematical representation of Finite State Machine, Automata Classification, Automata in Real World.

UNIT II:

Objectives: Delineation of various components of formal languages and grammars

Formal Language Theory: Symbols, Alphabets and Strings, Operations on Strings, Formal Languages, Operations on Languages.

Formal Languages/ Grammar Hierarchy: Formal Languages, Regular Language, Context-Free Language, Context- Sensitive Language, Recursive Language, Recursively Enumerable Language, Other Forms of Formal Languages, Relationship between Grammars and Languages.

UNIT III:

Objectives: Description of Finite automata, variants in it and their equivalence

Finite Automata: Introduction, Deterministic Finite Automata (DFA), Design of DFAs, Non Deterministic Finite Automata (NFA), Non –Deterministic Automata with ϵ -moves, Design of NFA-with ϵ -moves, Advantages of Non-Deterministic Finite Automata, NFA Versus DFA.

Equivalent Automata: Equivalent Finite State Automata, Equivalence of NFA/ NFA- and DFA, Equivalence of NFA, with ϵ -moves to NFA, without ϵ -moves.

UNIT IV:

Objectives: Minimization, optimization of finite automata, regular expressions and equivalence of finite automata and regular expressions

Minimization/ Optimization of DFA: Optimum DFA, Minimal DFA, Two way DFA, DFA Vs 2DFA.

Regular Expressions and Languages: Regular languages, Regular expressions, Components of Regular Expression, Properties of Regular Expressions, Uses of Regular Expressions.

Finite Automata and Regular Expressions: Properties of Regular Sets and Regular Languages, Arden's Theorem, Equivalence of Finite Automata and Regular Expressions, Equivalence of DFA and Regular Expression, Equivalence of NFA and Regular Expression.

UNIT V:

Objectives: Illustration about grammars, classification and simplification of grammars

Transducers: Moore Machine, Melay Machine, Difference between Moore and Melay Machines, Properties / Equivalence of Moore and Melay Machines.

Context-Free Grammars and Context-Free Languages: Types of Grammar, Ambiguous and Unambiguous Grammars, Noam Chomsky's Classification of Grammar and Finite Automata, Relation between Regular Grammar, Finite Automata and Push down Automata.

Simplification of Context –Free Grammar: Simplification of Context-Free Grammars, Elimination of E-productions, Elimination of Unit Productions, Normal Forms for Context Free Grammars, Chomsky Normal Form, Greibach Normal Form, Chomsky Vs Greibach Normal Form, Application of Context-Free Grammars.

UNIT VI:

Objectives: Delineation of Turing Machines

Turing Machine: Introduction, Components of Turing Machine, Description of Turing Machine, Elements of TM, Moves of a TM, Language accepted by a TM, Role of TM's, Design of TM's.

TM Extensions and Languages: TM Languages, Undecidable Problem, P and NP classes of Languages.

TEXT BOOKS:

1. A text book on Automata Theory, Nasir S.F.B, P.K. Srimani, Cambridge University Press
2. Introduction to Automata theory, Formal languages and computation, Shamalendu kandar, Pearson.
3. Elements of Theory of Computation, Harry R Lewis, Papdimitriou, PHI
4. Introduction to Theory of computation, 2nd ed, Michel siper, CENGAGE

REFERENCE BOOKS:

1. Formal Languages and Automata theory, C.K.Nagpal, OXFORD
2. Theory of Computation, aproblem solving approach, kavi Mahesh, Wiley
3. Theory of Computation, VIvek kulkarni, OXFORD.

SYLLABUS:
B.V. RAJU COLLEGE::VISHNUPUR
Affiliated to Adikavi Nannaya University
MCA 2.4 Formal Languages & Automata Theory

- 1. Finite Automata and Regular Expressions: Basic Concepts of Finite State Systems, Deterministic and Non-Deterministic Finite Automata, Finite Automata with ϵ -moves, Regular Expressions, Mealy and Moore Machines, Two-Way Finite Automate, Applications of FSM.**
- 2. Regular sets & Regular Grammars: Basic Definitions of Formal Languages and Grammars, Regular Sets and Regular Grammars, Closure Properties of Regular Sets, Pumping Lemma for Regular Sets, Decision Algorithm for Regular Sets, Myhill-Nerode Theorem, Minimization of Finite Automata.**
- 3. Context Free Grammars and Languages: Context Free Grammars and Languages, Derivation Trees, Simplification of Context Free Grammars, Normal Forms, Pumping Lemma for CFL, Closure properties of CFL's, Decision Algorithm for CFL.**
- 4. Push down Automata: Informal Description, Definitions, Push-Down Automata and Context free Languages, Parsing and Push-Down Automata.**
- 5. Turing Machines: The Definition of Turing Machine, Design and Techniques for Construction of Turing Machines, Combining Turing Machines.**
- 6. Universal Turing Machines and Undecidability : Universal Turing Machines. The Halting Problem, Variants of Turing Machines, Restricted Turing Machines , Decidable & Undecidable Problems - Post Correspondence Problem.**
- 7. Chomsky Hierarchy of Languages: Regular Grammars, Unrestricted Grammars, Context Sensitive languages, Relationship between Classes of Languages.**

Text books:

- 1. Introduction to Automata Theory, Languages and Computations – J.E. Hopcroft, & J.D. Ullman , Pearson Education Asia.**

Reference books:

- 1. Introduction to languages and theory of computation – John C. Martin (MGH)**
- 2. Theory of Computation, KLP Mishra and N. Chandra Sekhar, IV th Edition, PHI**
- 3. Introduction to Theory of Computation – Michael Sipser (Thomson Nrools/Cole)**

COMPARISON OF SYLLABUS

SVECW	BVRC
TOTAL: 6 UNITS	TOTAL: 7 UNITS
UNIT I, III, V	UNIT I
UNIT II, IV	UNIT II
UNIT V	UNIT III
UNIT VI(PARTIAL)	UNIT V
UNIT II	UNIT VII
	WE HAVE NO MATCHING FOR UNITS IV AND VI

**REGARDING TEXT BOOKS, REFERENCE BOOKS GIVEN IN SYLLABUS
ONLY ONE MATCHING**

**Introduction to Theory of Computation – Michael Sipser (Thomson Nrools/Cole)
TEXT BOOK FOR SVECW
MATCHES WITH
REFERENCE BOOK OF BVRC.**

ACTION PLAN

‘Essential Elements’ to be used in the ‘Course Material’

1. SYLLABUS
2. LESSON PLAN
 - a. COURSE OBJECTIVES
 - b. CURSE OUTCOMES
 - c. DAILY DELIVERY REPORT FORMAT

SNO	DATE	NO. OF HOURS	TOPIC NAME	REFERENCE IN BOOK WITH PAGENO
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- d. TEXT BOOKS, REFERECE BOOKS
 - e. PREREQUISITE (NOTATIONS, REFERENCE BOOKS)
3. MICROLEVEL DETILS:

This is a planning before start of the course:

Methodology: ppts, Lecture Board, Pdfs, Audio's/vedio's, Previous year question papers of at least 2 other universities offering the same course, assignments unit wise
Guest Lectures for difficult topics either from academicians or Industry as per need and requirement.

4. Macro level Elements
Basic Concepts before Each Unit.
5. Course Material – Unit –wise
 - a. Theorem if any
 - b. Problems – Examples
 - c. Question Bank: SAQ, LAQ at the end of each Unit
 - d. Applications if any
 - e. Supplementary Problems(Additional or More examples)
6. Online Resources – books, Web references – To be added at the end of Material.
7. Worksheets:
 - a. Try it on your own or self practice (Level 1 (easy), Level 2(think type))
 - b. Objective type Questions which helps students for Competitive Exams like GATE, IES, IAS, etc.
8. Preparing Handout as per topic.(brief description of contents)
9. Solutions to difficult Problems(in work sheets)
10. Guidelines for Advanced Learning.

Student Assessment: conducting tests, Internals, External etc.

Activities to be planned in class room for better understanding:

**Make groups the entire class on combining Merit/Average/poor students
And provide their presentation through:**

- **Power Point Presentation**
- **Poster or chart preparation**
- **Blackboard**

Topics in TC/ FLAT selected:

- ❖ **Moore Machines/Mealy Machines/Conversions**
- ❖ **Chomsky Hierarchy of Grammars**
- ❖ **Design of Automata FSA/NFSA/conversions**



CERTIFICATE

VEDIC

VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT

Mr. V. Bhaskara Murthy
Assoc. Professor, MCA Dept.

FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON

E-content Development

HELD AT

VEDIC, AZIZ NAGAR, HYDERABAD

BETWEEN

DEC 16-17, 2016

Sivakumar

COURSE CO-ORDINATOR

Star

SENIOR ADVISOR

Sundarajan

DIRECTOR



CERTIFICATE

VEDIC
VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT

Mr. S.K. Alisha
Sr. Asst. Professor, MCA Dept.
FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON

E-content Development

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Sankarajan

DIRECTOR



CERTIFICATE

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VISHNU EDUCATIONAL
DEVELOPMENT AND
INNOVATION CENTER

THIS IS TO CERTIFY THAT

Mr. A.V. Satyanarayana Raju
Lecturer in Computer Science

FROM

B.V. Raju College

HAS PARTICIPATED IN AND SUCCESSFULLY COMPLETED THE WORKSHOP ON
E-content Development

HELD AT

VEDIC, AZIZ NAGAR, HYDERABAD

ON

FEB 13, 2017

Sivakumari

COURSE CO-ORDINATOR

Star

SENIOR ADVISOR

Shankarajen

DIRECTOR

B.V. RAJU COLLEGE :: VISHNUPUR
6.3.3

2016-17

8. E-LAB IN C-PROGRAMMING

Venue : VEDIC, AZIZ NAGAR, Moinabad Mandal, Ranga Reddy District, Telangana State

Mentors: 1.Dr.Rajeev Sukumaran

2.Dr.Christuraj .M R

SNO	Dates (from-to) (DD-MM-YYYY)	Title of the professional development program organized for teaching staff	No. of Participants
8	21-23JUL2016	E-lab in C programming	5

8. E-LAB IN C-PROGRAMMING

21-23JUL2016

Sno	Name of the Faculty	Designation
1	Mr. P.V. Bhima Raju	Programmer
2	Ms. D. Roja Rani	Asst. Professor
3	Mr. B. Naresh	Asst. Professor
4	Mr. M. N. Ravindra Babu	Asst. Professor
5	Mr. A. Satya Vamsi Kumar	Asst. Professor

Agenda :

Day 1 : Session 1 : Pro's and Con's of Online Compilers

Session 2,3 & 4 : Hands on Experience among Online Compilers and eLab

Day 2 : Session 1 : Introduction to Mandatory test cases for C

Session 2,3 & 4 : Hands on Experience in Building Mandatory test cases for C.

Day 3: Session 1 : Introduction to eLab Architecture

Session 2,3 Hands on Experience in debugging server related issues.

Session 4 : Action plan for Java, Python, Data Structures and Design & Analysis of Algorithm.

Pilot Workshop on eLab (Students)

Vision:

To utilize Technology based education to improve learning

Mission:

To up skill students to use technology based learning strategies in learning C Programming

Methodology:

This hands-on pilot workshop focuses on problem based & experiential modes of learning through virtual learning environment (eLab). Students would experience and introspect their understanding on logical reasoning & programming skill.

Objectives:

- A Web based individualized and collaborative platform in order to enhance the programming ability
- Organizing students to interact with new knowledge
- Helping students record and represent knowledge
- Helping students reflect on their learning
- Showcasing all the student's skills and their learning success
- Delivering analytics and dashboards that indicate the top areas of interests among students
- Enhancing the employability skills through experiential learning
- Motivates through digital reflection
- Helps to compile a individual portfolio
- Provides the facility to record all the communications between client side content and a host system called the run-time environment Sharable Content Object Reference Model (SCROM)
- Stimulate Problem solving skills and Life-Long learning skills
- Increase awareness of how they are learning
- To take responsibility for their learning
- Enable the student to engage in a deep rather than surface approach
- eLab is a vehicle for development of problem solving skills
- New information is acquired through self directed learning

Trainers:

Prof. Lakshmi D & Mr. Naveen Kumar S

Workshop Schedule

Day 1	
Session 1	
9:00 - 9:15	Self Introduction
9:15 - 9:30	Rational about workshop – Big Picture
9:30 - 9:45	Group Activity 1 – Challenges in programming
9:45 - 10:15	Cognitive perspectives of learning & Motivation – Emphasizing importance of programming skill
10:15 - 10:30	Creating awareness about technology based learning , 21 st century learning technologies, Flipped Classroom
Session 2 (Tea Break: 10:30 - 10:45)	
10:45 - 11:30	Exposure on different Online Programming tools and software's
11:30 - 12:30	Introduction & Practices on Level 1 - Basic Level (C programming (5 Questions))
Session 3 (12:30 – 01:30 Lunch)	
1:30 to 02:45	Demo on eLab reports Group Activity 2 – Understand industry needs and demands (Web Based)
Session 4 (02:45 to 3:00 – Tea Break)	
03:00 to 4:00	Practices on Level 1 - Basic Level (C programming (10 Questions))
04:00 to 5:00	Importance of Higher Order Thinking Skills (HTOS) – Bloom's Taxonomy

Day 2	
Session 1	
9:00 - 10:30	Introduction & Practices on Level 2 – Expert Level (C programming)

Session 2 (10:30 - 10:45 – Tea Break)	
10:45 - 12: 30	Group Activity 3 - (Role Play/Presentation)
Session 3 (12:30 – 01:30 Lunch)	
1:30 to 02:45	Introduction & Practices on Level 3 – Professional Level (C programming)
Session 4 (02:45 to 3:00 – Tea Break)	
03:00 to 5:00	Introduction about eLab Certifications , Oral and Online Feedback

Requirements:

Computers for all the participants
A4 Sheets for each student (5 nos)
Hand Mic/Cordless Mic
Projector
White Board (Marker)/Black Board (chalks)
Duster
Water Bottles (2 nos)

e-lab in C-programming for faculty and Programmers (Faculty of C-programming language and Lab Programmers.) held on 21st July- 23rd July 2016

4 messages

Ch. Srinivasa Rao <srinivasarao.ch@srivishnu.edu.in> Tue, Jul 12, 2016 at 4:24 PM

To: mmekrishna@gmail.com, viceprincipal@seethapoly.edu.in, murthyvb@gmail.com, BVRITN Dean Engineering <dean.engineering@bvr.it.ac.in>, yramu@svecw.edu.in

Dear sir,

please send the Faculty participants list for e-lab in C-programming for faculty and Programmers (Faculty of C-programming language and Lab Programmers.) held on 21st July- 23rd July 2016

Total No of faculty:32

BVRIT H: 6

BVRIT N:6

SVECW:6

VIT :6

BVRICE: 6

SBSP:2

kindly Mail the faculty participants list as per the count.

Thanks and Regards**Ch.Srinivasa Rao**
VEDIC,Aziz Nagar,
Moinabad Mandal
R.R.Dist,Telangana
Mob:9866084956.**Engineering Sciences****BVRIT | SVECW | VIT | BVRITH****Medical Sciences****VDC | SVCP | VIPER | BVRICE**

BHASKARA MURTHY VEERUBHOTLA <murthyvb@gmail.com> Tue, Jul 12, 2016 at 4:27 PM

To: irkbvrice <irkbvrice@gmail.com>

[Quoted text hidden]

BHASKARA MURTHY VEERUBHOTLA <murthyvb@gmail.com> Tue, Jul 12, 2016 at 4:37 PM

To: "Ch. Srinivasa Rao" <srinivasarao.ch@srivishnu.edu.in>

1. P.V. Bhima Raju
2. D. Roja Rani
3. B. Naresh
4. M. N. Ravindra Babu
5. A. Satya Vamsi Kumar

The above faculty are listed to attend as per data today

With regards

4.

[Quoted text hidden]

Ch. Srinivasa Rao <srinivasarao.ch@srivishnu.edu.in> Tue, Jul 12, 2016 at 4:50 PM
To: BHASKARA MURTHY VEERUBHOTLA <murthyvb@gmail.com>

Cc: vedic@srivishnu.edu.in, "A. Sesa Madhuri" <seshamadhuri.a@srivishnu.edu.in>

Dear sir,
thanks a lot for immediate response

[Quoted text hidden]

--

Thanks and Regards

Ch.Srinivasa Rao
VEDIC,Aziz Nagar,
Moinabad Mandal
R.R.Dist,Telangana
Mob:9866084956.

[Quoted text hidden]