

Proposal for establishing
**Vishnu Educational Development & Innovation Centre
(VEDIC)**



@



Proposal Document Prepared by

Prof. Rajeev Sukumaran

Senior Advisor, Teaching Learning Centre
Indian Institute of Technology Madras

Submitted on
26 March 2016

Proposal for establishing

Vishnu Educational Development and Innovation Centre

Vision Statement : The Vishnu Educational Development and Innovation Centre (VEDIC) is a place where our faculty members, staff, students, and other members work in a collaborative environment to create rich, engaged learning and teaching experiences; conduct research in all aspects of education; increase student success, build vital partnerships for improved learning, and invites individuals to become members of an intellectually diverse, active learning community.

Contents

	Page No
1 Preamble	3
2 Purpose of Establishing the Centre.....	3
3 People.....	3
4 Five Year Action Plan.....	5
5 Year ONE Action Plan.....	6
6 Weekly Routine.....	7
7 Activities for Faculty Members & Support Staff.....	8
7.1 Certification Programmes (Workshops) for Faculty Members	8
7.2 Certification Programmes (Workshops) for Support Staff, Maintenance Staff.....	10
7.3 Conferences, Symposium & Events for Engineering Teachers.....	10
8 Activities for Students.....	11
8.1 PG Diploma Programme	11
8.2 Certification Programmes (Workshops) for Undergraduate Students	12
8.3 Certification Programmes (Workshops) for Postgraduate Students	13
9 Library	14
10 Conclusion	20

1. Preamble

This document proposes establishment of Vishnu Educational Development and Innovation Centre (VEDIC).

The Vision for this Center, outlined in this Proposal, has been developed through a collaborative process during the past few weeks, including a campus-wide vision-crafting process that involved faculty and staff, a review of multiple existing such centers at: IIT Madras, SRM University, Thiagarajar College of Engineering Madurai, PSG College of Technology Coimbatore and other Academic Staff Colleges across different Universities both in India and abroad.

This document provides the rationale for the establishment of Sri Vishnu Educational Development and Innovation Centre (VEDIC) as an important enabling mechanism for achieving our institutional goals of increasing learning retention and graduation rates by providing outstanding instruction and support. It outlines the Center's functions in the context of our institutional priorities and our substantial experience with curricular engagement and student support services and in terms of intra- and inter- institutional connections.

2. Purpose of Establishing the Centre

Center Goals:

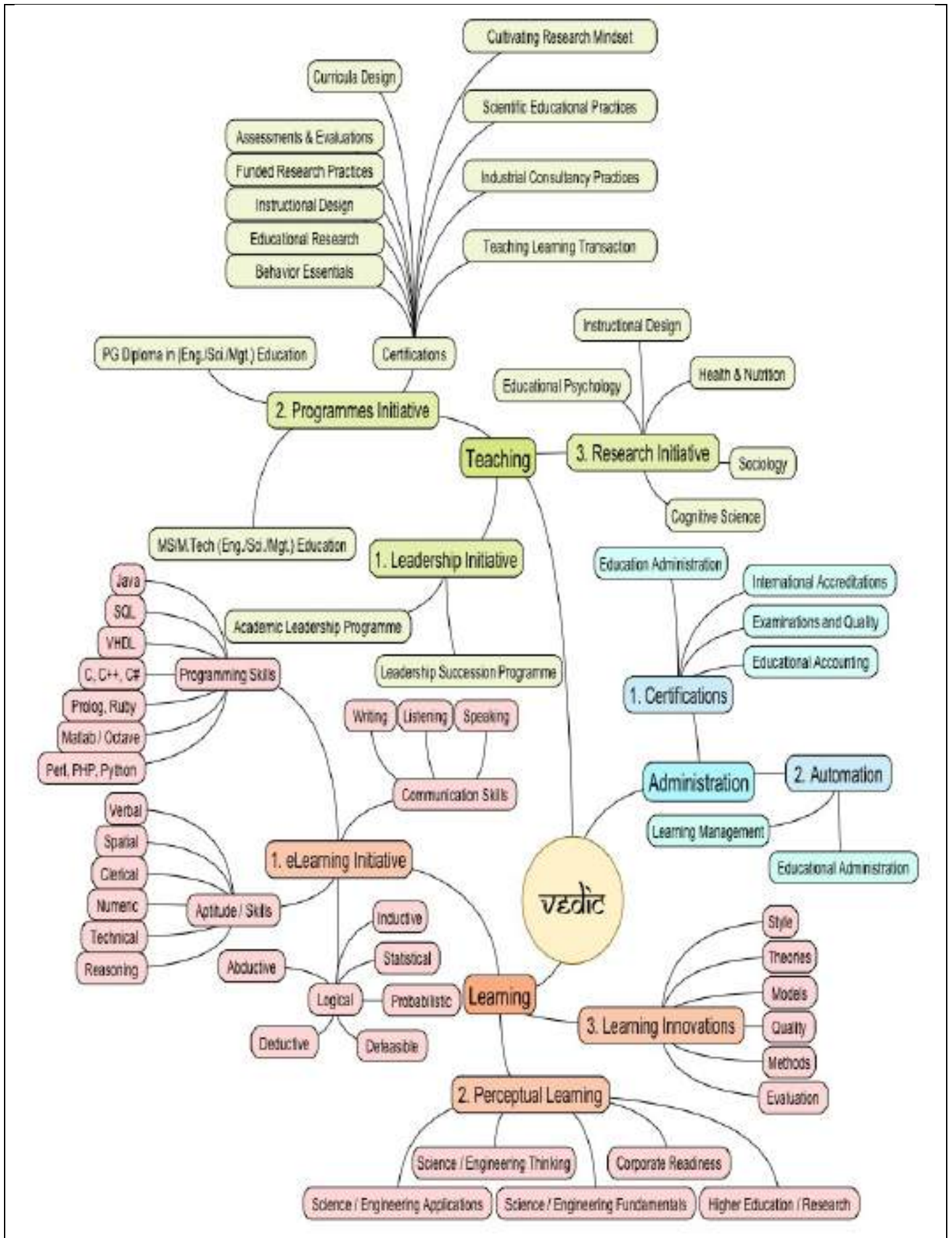
VEDIC will:

- a) Engage our Institutions faculty members, staff, students, to work in a collaborative environment to create rich, engaged learning, teaching and improved behavioral experiences;
- b) Contribute to significant increases in student learning retention and graduation rates; and thus
- c) Establish our Institution as a System leader in the areas of *Educational Research* and *Academic Leadership*.

The proposed Center will be:

- Integral to the academic mission of our group of Institutions
- Essential in offering stronger and more integrated learning support services to its faculty members and students
- Led by experienced faculty, staff, and students
- Charged to build the capacity of our Institutions to integrate teaching, learning, with engagement through active-learning and related academic initiatives
- Provided with curricular support for our traditional courses and environments
- Conducting research in education to support arts education, science education and engineering education
- Positioning the institution as a leader in efforts to advance engaged teaching and learning

3. Activities of the Centre



4. FIVE Year Action Plan

Year – I	Year – II	Year – III	Year – IV	Year – V
<p><u>Theme: Build Inward Strength</u></p> <p><u>A. Within Institution</u></p> <p>Strengthen:</p> <ul style="list-style-type: none"> • Faculty • Students • Technology Enabled Learning • Heads • Principals • All Support staff • Management • Parents <p>Create:</p> <ul style="list-style-type: none"> • Self Sustenance Docs. • Learning Tools & Materials • Culture & Practices Documentation <p><u>B. With Other Institutions (our group)</u></p> <p>Strengthen:</p> <ul style="list-style-type: none"> • School Teachers • School Students • School Student Parents <p><u>C. With Industries (our group)</u></p> <p>Strengthen:</p> <ul style="list-style-type: none"> • Corporate Employees • Corporate Managers • Corporate Trainers 	<p><u>Theme: Create (Brand) Ambassadors</u></p> <p><u>A. Within Institution</u></p> <p>Create:</p> <ul style="list-style-type: none"> • Competent Faculty • Competent Students • Competency Tech-enabled Learning • Competent Leaders • Competent Managers • Competent School Teachers • Responsible School-Students • Institution Culture • Student Diversity Culture <p><u>B. With Other Institutions (outside)</u></p> <p>Strengthen:</p> <ul style="list-style-type: none"> • Faculty • Students • Student Admission Pipeline <p><u>C. With Industries</u></p> <p>Create:</p> <ul style="list-style-type: none"> • Corporate Learning Culture • Academic-Industry Cultural Bridge • Student Placement Pipeline 	<p><u>Theme: Collaborate - Stake Holders</u></p> <p><u>A. Within Institution</u></p> <p>Create:</p> <ul style="list-style-type: none"> • Faculty Excellence Centre • Student Excellence Centre • Technology Learning Excel. Centre • Human Excellence Centre • Women Upliftment Excel. Centre • Administrative Excellence Centre • Academic Leadership Centre • Management Excellence Centre • School. Admin. Excellence Centre • Parenting Excellence Centre • Cultural Excellence Centre • Student Diversity Excellence Centre <p><u>B. With Other Institutions (outside)</u></p> <ul style="list-style-type: none"> • Faculty Behavioral Excel. Program. • Stud. Behavioral Excel. Program. <p><u>C. With Industries</u></p> <p>Create Corporate:</p> <ul style="list-style-type: none"> • Learning Excellence Centre • Management Excellence Centre • Entrepreneurial Excellence Centre 	<p><u>Theme: Create Research Activities</u></p> <p><u>A. Within Institution</u></p> <p>Conduct Research on:</p> <ul style="list-style-type: none"> • Educational Activities • Technology Enabled Learning • Student Action Projects • Adult Behaviors • Leadership • Administration • Parenting • Culture & Practices <p><u>B. With Other Institutions (outside)</u></p> <p>Conduct Research on:</p> <ul style="list-style-type: none"> • Industrial Behavior • Team Work • Work-Life synchrony • Win-Win Initiatives <p><u>C. With Industries</u></p> <p>Conduct Research on:</p> <ul style="list-style-type: none"> • Skill Learning and Development • Scientific Recruitment • Corporate Leadership • Entrepreneurial Skill Development • Product Development 	<p><u>Theme: Create Research Expertise</u></p> <p><u>A. Within Institution</u></p> <p>Develop New Knowledge on:</p> <ul style="list-style-type: none"> • Learning Administration • Curricula Design & Implementation • Teaching Learning Practices • Institutional Culture • Holistic Learning & Development <p><u>B. With Other Institutions (outside)</u></p> <p>Develop New Knowledge on:</p> <ul style="list-style-type: none"> • Cooperative Learning Practices • Collaborative R&D • Niche-Domain Development <p><u>C. With Industries</u></p> <p>Conduct Research on:</p> <ul style="list-style-type: none"> • Industrial Practices • Collaborative R&D • Niche-Domain Development

5. Year ONE Action Plan

	April 2016	May 2016	June 2016	July 2016	August 2016	September 2016
Week-1			Training for Corporate Staff	Training for Corporate Staff	III Year Students – B4	III Year Students – B7
Week-2	WS – SEP – B1	WS – Learning & Leading	WS – SEP – B3	WS – SEP – B5	WS – SEP – B8	WS – SEP – B11
Week-3		III Year Students – B2	Training for School Teachers	WS – SEP – B6	WS – SEP – B9	WS – SEP – B12
Week-4	III Year Students – B1	WS – SEP – B2	WS – SEP – B4	WS – SEP – B7	WS – SEP – B10	WS – SEP – B13

	October 2016	November 2016	December 2016	January 2017	February 2017	March 2017
Week-1	III Year Students – B10	III Year Students – B13	Training for Corporates	III Year Students – B16	III Year Students – B19	III Year Students – B22
Week-2	WS – SEP – B14	WS – SEP – B17	WS – SEP – B20	WS – SEP – B23	WS – SEP – B26	WS – SEP – B29
Week-3	WS – SEP – B15	WS – SEP – B18	WS – SEP – B21	WS – SEP – B24	WS – SEP – B27	WS – SEP – B30
Week-4	WS – SEP – B16	WS – SEP – B19	WS – SEP – B22	WS – SEP – B25	WS – SEP – B28	WS – SEP – B31

WS – Workshop

SEP – Scientific Educational Practices Workshop

B1, B2.... – Batch Numbers

6. Weekly Routine

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
05.00 AM – 05:03 AM	Wake-Up Bell	Wake-Up Bell	Wake-Up Bell	Wake-Up Bell	Wake-Up Bell	Wake-Up Bell	Wake-Up Bell
05.03 AM – 05:25 AM	Morning Routine	Morning Routine	Morning Routine	Morning Routine	Morning Routine	Morning Routine	Morning Routine
05.30 AM – 06:15 AM	Yoga & Meditation	Yoga & Meditation	Yoga & Meditation	Yoga & Meditation	Yoga & Meditation	Yoga & Meditation	Yoga & Meditation
06.15 AM – 06:20 AM <i>Energy Drink</i>	Spirulina-Lemon-Honey	Brahmi-Lemon-Honey	Chlorella-Lemon-Honey	Aswagandha-Lemon-Honey	Alfalfa-Lemon-Honey	Wheatgrass-Lemon-Honey	Triphala-Lemon-Honey
06.15 AM – 07:00 AM	Cycling / Running	Walking / Stretching	Cycling / Running	Walking / Stretching	Cycling / Running	Walking / Stretching	Cycling / Running
07.00 AM – 07:30 AM	Bath & Get Ready	Bath & Get Ready	Bath & Get Ready	Bath & Get Ready	Bath & Get Ready	Bath & Get Ready	Bath & Get Ready
07.30 AM – 08:00 AM <i>Breakfast</i>	Tender Coconut Sprouts, Banana Jonna Millet Tiffen	Fruit Juice Sprouts, Banana Sajja Millet Tiffen	Tender Coconut Sprouts, Banana Ragi Millet Tiffen	Fruit Juice Sprouts, Banana Korra Millet Tiffen	Tender Coconut Sprouts, Banana Samalu Millet Tiffen	Fruit Juice Sprouts, Banana Arikelu Millet Tiffen	Tender Coconut Sprouts, Banana Variga Millet Tiffen
08.00 AM – 10:00 AM	Training Session - 1	Training Session - 1	Training Session - 1	Training Session - 1	Training Session - 1	Training Session - 1	Training Session - 1
10.00 AM – 10:30 AM <i>Tea/Coffee/Milk</i>	Granola Bar	Brocoli Crisps	Mushroom Crisps	Kakarakaya Crisps	Bendakaya Crisps	Carrot Crisps	Whole Grain Crackers
10.30 AM – 12:30 PM	Training Session - 2	Training Session - 2	Training Session - 2	Training Session - 2	Training Session - 2	Training Session - 2	Training Session - 2
12.30 PM – 01:30 PM <i>Lunch</i>	White Rice Mixed veg Dry Leafy veg Curry Groundnut Chuttney	Vegetable biryani Mixed veg Dry Carrot Pickle Mango Chuttney	Raw rice gruel Mixed veg Dry Pepper Pappad Gooseberry Chutney	White Rice Mixed veg Dry Leafy veg Curry Groundnut Chuttney	Vegetable biryani Mixed veg Dry Carrot Pickle Mango Chuttney	Raw rice gruel Mixed veg Dry Pepper Pappad Gooseberry Chutney	Full Meals
01.30 PM – 03:30 PM	Training Session - 3	Training Session - 3	Training Session - 3	Training Session - 3	Training Session - 3	Training Session - 3	Training Session - 3
03.30 PM – 04:00 PM <i>Cool Drinks</i>	Butter Milk Drink Boiled Green Peas	Cashew Milk Drink Boiled Channa	Soy Milk Drink Boiled Greengram	Badam Milk Drink Boiled Groundnut	Yogurt Drink Boiled Corn	Coconut Milk Drink Boiled Chikudu	Hemp Milk Drink Boiled Bopparulu
04.00 PM – 05:00 PM	Training Session - 4	Training Session - 4	Training Session - 4	Training Session - 4	Training Session - 4	Training Session - 4	Training Session - 4
05.00 PM – 06:30 PM	Out-bound Activities	Out-bound Activities	Out-bound Activities	Out-bound Activities	Out-bound Activities	Out-bound Activities	Out-bound Activities
06.30 PM – 07:00 PM	Evening Routine	Evening Routine	Evening Routine	Evening Routine	Evening Routine	Evening Routine	Evening Routine
07.00 PM – 07:30 PM <i>Dinner</i>	Roots (Karrapendalam) Tomato Curry Veg Salad, Banana	Rotis / Pulka Moong Dal Curry Veg Salad, Apple	Atukula Upma / Poha Dondakaya Curry Veg Salad, Orange	Multigrain Dosa Sambar / Chutney Veg Salad, Water Melon	Ragi Steamed Vegetable Stew Veg Salad, Pommegr.	Cracked Wheat Kichadi Potato Curry Veg Salad, Gauva	Steamed Idli Multi-veg. Curry Veg Salad, Chicku
07.30 PM – 09:00 PM	Meetings / Get Together	Meetings / Get Together	Meetings / Get Together	Meetings / Get Together	Meetings / Get Together	Meetings / Get Together	Movie
09:30 PM	Lights Off	Lights Off	Lights Off	Lights Off	Lights Off	Lights Off	Lights Off

7. Activities for Faculty Members & Support Staff

7.1) Certification Programmes (Workshops)

No	Workshop	Audience	Hours/Day	Learning Objectives (OBF)	Methods*	Educational Theories	Follow-up
1	Curricula Design	Curricula Design Team	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Use learning theories for course design. • Design courses using learning models. • Design Programme learning outcomes. (PEO, PLO) • Generate plan for implementation • Assess & Evaluate Curricula Implementation 	AL, EL, PBL	Epistemology: Engineering, Curricula Dimensions of Knowledge: 6 types Philosophy of Knowledge: 4Qs Relations: Concept Map, Mind Map Models: OBF, CDIO – Scientific Proof Standards: Bologna, Washington	Weekly Follow-up till Curricula Design Documentation and Curricula Implementation
2	Instructional Design	All Teaching Faculty Members	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Adult learning principles. • Analyzing tasks and building learning objectives. • Justify the need for Message design principles. • Create Learning Feedback. • Plan for assessments and evaluation. 	AL, EL, PBL	Learning: Bloom, Kolb, Dale - Proofs Instruction: 9 Events, 17 Messages Assessment: Rogers, AFL, AOL Evaluations: Kirkpatrick - Proofs	Weekly Follow-up till “Instructional Design Documentation” is created
3	Teaching Learning Transaction	All Teaching Faculty Members	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Plan for a course delivery • Analyze learning flow • Multi-tasking skills and practices in lecture & labs • Learning verification and validation • Maintain decorum and discipline 	AL, CBL	Learning Types: DBL, SL, IBL, PBL, EL, CBL – Scientific Proofs Instruction: Gagne, ARCS, ISD Discipline Theories – students/staff	Weekly Follow-up till “Instructional Practice Documentation” is created
4	Learning Assessments & Evaluation	All Teaching Faculty Members	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Differentiate myths and facts on assessment, evaluation • Analyze formative, summative, confirmative assessment • Identify holistic learning assessment and behavior • Design learning evaluation tools • Verify learning sustenance 	AL, EL, IBL, PBL	Assessments: Formative, Summative, Confirmative - Proofs Feedback: Rogers, Thurlings Evaluation: Kolb, Kirkpatrick Sustenance: Scriven, Ringer	Weekly Follow-up till “Assessment & Evaluation Practice Documentation” is created
5	Educational Behavioral Essentials	All Teaching Faculty Members	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Analyze psycho-socio elements of Teaching Profession • Create <i>identity</i> and <i>roles</i> • Differentiate personality perceptions and reality • Distinguish the generations and their characteristics • Manage self in dynamic ecosystem 	IBL, Probe	Theory: Psycho-Social behavioral Identity-roles: Personal, Public, Professional Anthropology and Generations Learning dynamics and behavior	Weekly Follow-up till “Discipline & Behavior Practice Documentation” is created
6	Educational Research	Faculty Members involved in Research	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Analyze techniques to conduct educational research • List Research Methods: Question, Theory, Methods, Reason, Replication, Generalization, Disclose • Research on learning motivation and development 	IBL, PBL	Themes: Mindset, Epistemology, Mechanisms, Systems, Diversity, Inclusiveness Theory: Grounded, Ethnography, Action, Phenomenography, Discourse Analysis	Weekly Follow-up till “Educational Research - Best Practices Documentation” is created

* AL – Active Learning, EL – Experiential Learning, PBL – Problem Based Learning, SL – Solution Based Learning, IBL – Inquiry Based Learning, RBL – Research Based Learning

No	Workshop	Audience	Hours/Day	Learning Objectives (OBF)	Methods*	Educational Theories	Follow-up
7	Industrial Consultancy Practices	Faculty Members involved in consultancy	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> Identify domains in industrial consultancy Use theories in need analysis and consulting Design consultancy framework Generate themes in consultancy Solve client needs and requirements 	IBL, PBL, EL	Domains: Strategic Studies, Problem Solving, Service Provision, Process Consulting Theories: Schein's, CAM, PC, Themes: Project, Design, Software, Management, Educational, Skill, Quality	Weekly Follow-up till "Consultancy Practices Documentation" is created
8	Funded & Sponsored Research Practices	Members involved in funded research	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> Differentiate funded and sponsored research Identify research mindset and practice mindset Author to write high-impact project proposals Utilize research validation techniques Create high profile research skills 	EL, IBL, PBL	Consulting Research, Scholarly Research Theories : Research Mindset, Methodology, Data Analysis, Interpretation, Research Accumen Themes: Consultancy, Infrastructure, Extensions, Incubation etc.,	Weekly Follow-up till "Funded & Sponsored Research Practices Documentation" is created
9	Scientific Educational Practices	All Teaching Faculty Members	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> Identify how brain constructs knowledge, skills Use learning theories for teaching Design courses using learning models Facilitate learning with learning styles Generate positive outlook towards learning 	EL, PBL	3Cs, Andra, Ergo, Ubuntu gogies ADDIE, ARCS, DBL, SL, IBL, PBL, EL, CBL, Concept, Mind-Map Instructional & Course Design, Conduction, Assessment, Evaluation Discipline Theory, Pillars to Succeed	Weekly Follow-up till "Scientific Learning Practice Documentation" is created
10	Learning & Leading	Principals, Deans, Directors, Heads of Departments	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> Identify how brain learns competency Use Educational Theories for Positionality Build Skills, Competency & Performance Learn Theories to Mentor, Coach, Guide Inculcate Responsibility and Accountability 	EL, PBL, IBL	Theory: Heuta, Ubuntu, Tirby gogies Dimension: Skill-Competency Matrix Method: Coaching, Discipline, Feedback Practice: Culture Relations formation Roles: Rules, Responsibilities Accountability, Corrections	Monthly Sustenance follow-up for 6 months Help for setting up "Leadership Competency Center"
11	Technology enabled Learning	All Teaching Faculty Members	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> Identify learning with technology tools Learn to learn using technology Experimenting using virtual environments Identify learning measurement techniques Relate e-Content and multi-dimensional content 	PBL, CBL, IBL	Theory: Ergonagy, Technogogy, Ubuntu gogy Tools: All MOOC, Web 2+ Case Studies: NPTEL, A-View	Weekly Follow-up till "Scientific Learning Practice Documentation" is created
12	Cultivation of Research Mindset	All Faculty involved in Research	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> Identify how brain analyzes and synthesizes Assess research thought mindset and perception Distinguish facts, concepts, principles, theory and law Choose directional, dimensional, phenomenal, oriental Identify behavioral implications in cultivating mindset 	CBL, RBL	6 Dimensions of knowledge 4Q principles and practice ADDIE, Knowledge construction Theory: Brain Quadrants Assessments : Benziger, McCrae	Weekly Follow-up till "Scientific Research Mindset Practice Documentation" is created

* AL – Active Learning, EL – Experiential Learning, PBL – Problem Based Learning, SL – Solution Based Learning, IBL – Inquiry Based Learning, RBL – Research Based Learning

7.2) Certification Programmes (Workshops) for Support Staff and Maintenance Staff

No	Workshop	Audience	Hours/Day	Learning Objectives (OBF)	Methods*	Educational Theories	Follow-up
1	Perceptual Learning for Skill Development	All Technical / Support Staff Members	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> Identify how brain learns skills Differentiate Skill, Knowledge, Competency Identify Learning & Retention Methods Relate practice to skill construction Generate skill coaching matrix & metrics 	EL, PBL, SL	Ergonagy, Heutagogy Skill-Development Matrix Mind-Map, Technical Instructional Practices Skill Measurement Scale	Monthly Sustenance follow-up for 6 months Help in setting up “Skill Development Cell”
2	Workplace Ethics and adapting to Cultural Diversity	All Technical / General Maintenance / Security Staff	40 Hours / 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> Identify workplace diversity Personality and egocentricity Identify ethical behavior in workplace Distinguish discipline and personality traits Identify counseling and behavioral issues 	CBL, SL	Theory: Socio-cultural Settings: Ethics, Morals, Culture, Religion, Values Personal: Honesty, Integrity, Class: Submissive, Insufficiency, Deficiency	Weekly Follow-up till “Culture and Practices Documentation” is created

7.3) Conferences, Symposium & Events for Higher Education Teachers

No	Conference / Symposium	Audience	Hours/Day	Learning Objectives (OBF)	Methods*	Educational Theories	Follow-up
1	International Conference in Education	All Teaching Faculty	24 Hours / 3 full-days	At the end of this conference, delegates would be able to: <ul style="list-style-type: none"> Identify new teaching-learning strategies Provide opportunities to share innovations in learning Learn from others experiences and success stories Discuss aspects to improve learning experience Generate collaboration among teaching fraternity 	EL, PBL, SL	All Areas of Higher Education and Research	Monthly Sustenance follow-up for 2 months to help set up teaching learning centers in educational institutions
2	Symposium on Teaching Learning in Higher Education	All Technical / General Maintenance / Security Staff	24 Hours / 3 full-days	At the end of this symposium, delegates would be able to: <ul style="list-style-type: none"> Identify interested faculty members in teaching learning Provide a platform to share new thoughts and ideas Learn from others experiences and learning's Discuss activities for cooperative learning development Generate collaboration among teaching faternity 	CBL, SL	All Areas of Higher Education and Research	Weekly Follow-up till “Culture and Practices Documentation” is created
3	Teaching Skill Event	All Technical / General Maintenance / Security Staff	24 Hours / 3 full-days	At the end of this event, delegates would be able to: <ul style="list-style-type: none"> Identify new teaching techniques for producing a skill Analyze ways of learning skills and practices Identify best methods to teach a topic Distinguish between surface and deep learning Create teaching learning materials 	CBL, SL	Specific Areas of Higher Education and Research	Weekly Follow-up till “Teaching Culture and Practices Documentation” is created

* AL – Active Learning, EL – Experiential Learning, PBL – Problem Based Learning, SL – Solution Based Learning, IBL – Inquiry Based Learning

8. Activities for Students

8.1) PG Diploma Programme

No	Name of the PG Diploma Programme	Target Audience	No. of Hours/Day	Learning Objectives	Learning Methods*	Educational Theories	Follow-up Actions
1	Certified Professional in Engineering Education	Present Masters students	240Hours	At the end of this Certification, participants would be able to: <ul style="list-style-type: none"> Analyze learning needs and provide solutions Develop educational materials Facilitate learning environments 	AL, EL, PBL, SL, IBL, RBL	Learning Theory, Style Methods, Methods, Evaluation, Curricula Scientific proofs and evaluations GT, EG, AR, DA	Sustenance follow-up for next 3 months to establish "Engineering Teaching Competency"
2	Certified Professional in Dental Education	Present Masters students	240Hours	At the end of this Certification, participants would be able to: <ul style="list-style-type: none"> Analyze learning needs and provide solutions Develop educational materials Facilitate learning environments 	AL, EL, PBL, SL, IBL, RBL	Learning Theory, Style Methods, Methods, Evaluation, Curricula Scientific proofs and evaluations GT, EG, AR, DA	Sustenance follow-up for next 3 months to establish "Dental Teaching Competency"
3	Certified Professional in Pharmacy Education	Present Masters students	240Hours	At the end of this Certification, participants would be able to: <ul style="list-style-type: none"> Analyze learning needs and provide solutions Develop educational materials Facilitate learning environments 	AL, EL, PBL, SL, IBL, RBL	Learning Theory, Style Methods, Methods, Evaluation, Curricula Scientific proofs and evaluations GT, EG, AR, DA	Sustenance follow-up for next 3 months to establish "Pharmacy Teaching Competency"

- AL – Active Learning, EL – Experiential Learning, PBL – Problem Based Learning, SL – Solution Based Learning, IBL – Inquiry Based Learning,
- GT – Grounded Theory, EG – Ethnography, AR – Action Research, PG – Phenomenography, DA - Discourse Analysis

8.2) Certification Programmes (Workshops) for Undergraduate & Students

No	Name of the Workshop	Target Audience	No. of Hours/ Day	Learning Objectives	Learning Methods*	Educational Theories	Follow-up Actions
1	Perceptual Learning in Thinking (PET)	First Year Students	40 Hours 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Develop engineering thinking • Identify thinking, intelligences, personality & learning style • Cultivate self-responsibility and self-discipline • Use behavioral theories for self identify & positioning • Identify learning needs, qualities & strengths • Practice engineering thinking with demonstrations 	EL, PBL, IBL	Pedagogy, Andragogy, 3C's, Inquiry Holistic Thinking Pyramid, Arts to Engineering, Cone of Learning Social, Emotional Balance Ubuntugogy, Conditions of Learning Discipline Theories, Pillars to Succeed Psychomotor, Affective & Cognitive Taxonomy of Educational Objectives	Sustenance follow-up for next 3 months Help for setting up "Student Learning Practice Center"
2	Perceptual Learning in Fundamentals (PLF)	Second Year Students	40 Hours 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Identify how brain learns fundamental knowledge • Use cognitive theories for learning courses • Promote learning methods and tools • Identify work interest and positioning • Self-assess leisure and work interest • Practice learning retention exercises 	AL, EL, PBL, DL, SL, IBL	Educational Epistemology 6D's of Fundamental Knowledge DBL, SL, IBL, PBL, EL, CBL Concept Map & Mind-Map SII, MII, KSA Matrix, Elaboration theory Learning Assessment & Evaluation Myths to Laws, Learning Cycle Learning Design Framework	Sustenance follow-up for next 3 months Help for setting up "Engineering Funda Practice Lab"
3	Perceptual Learning in Applications (PLA)	Third Year Students	40 Hours 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Identify purpose of existence and life values • Use cognitive theories for learning technical applications • Interrelate skill, knowledge, competency • Developing research thinking • Generate skill coaching matrix & metrics • Grow from knowledge to wisdom 	EL, PBL, SL, IBL	Ergonagy, Heutagogy ADDIE, ARCS, Component Display Instructional System Design Skill-Competency Matrix Occupational Orientation Mentor, Coach, Guide, Supervise Skill Measurement Scale Feedback Methods & Analysis	Sustenance follow-up for next 3 months Help in setting up "Project Development Lab"
4.A	Perceptual Orientation for Corporate Readiness (PCR)	Careers towards Jobs	40 Hours 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Identify metacognitive self governance • Relate learning & work culture to growth potential • Relate practice to skill construction to job success 	EL, PBL, SL, IBL	Truth, Honesty, Integrity & Values Learning competency framework Career competency and skill acquisition Leadership learning and practice	Sustenance follow-up for next 3 months Help in setting up "Skill Development Centre"
4.B	Perceptual Orientation for Higher Education & Research (PHER)	Careers towards Education & Research	40 Hours 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Cultivate research mindset • Create mathematical expressive skill • Create Research Proposals 	EL, PBL, IBL	Behaviorist, Humanist, IP Model, Activity Model, Situated, Constructivism, Truth, Honesty, Integrity & Values CDIO, Introspection, Self-actualization	Sustenance follow-up for next 3 months in setting up "Learning Research Lab"

* AL – Active Learning, EL – Experiential Learning, PBL – Problem Based Learning, SL – Solution Based Learning, IBL – Inquiry Based Learning

8.3) Certification Programmes (Workshops) for Postgraduate Students

No	Name of the Workshop	Target Audience	No. of Hours/ Day	Learning Objectives	Learning Methods*	Educational Theories	Follow-up Actions
1	Perceptual Learning in Higher Thinking (PHET-I)	First Year Post Graduate Students	40 Hours 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Develop ability to think in analytical and logical terms • Identify how brain analyzes and synthesizes • Utilize message design for effective learning • Practice learning verification and validation • Distinguish facts, concepts, principles, theory and law • Inculcate responsibility and accountability 	EL, PBL, IBL	Andragogy, Heutagogy, Inquiry Holistic Thinking Pyramid, Arts to Eng. Learning – Cone, Taxonomy, Structure Concept Map & Mind-Map Ubuntugogy, Technogogy, Conditions of Learning, Myths to Laws, Discipline Theories, Pillars to Succeed	Sustenance follow-up for next 3 months Help for setting up “Student Learning Practice Center”
2	Perceptual Learning in Research Competency (PERC-I)	Second Year Post Graduate Students	40 Hours 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Multi-tasking skills and practices in lecture & labs • Identify behavioral implications in cultivating mindset • Learn to learn using technology • Assess research thought mindset and perception • Choose directional, dimensional, phenomenal, oriental • Assess research thought mindset and perception 	AL, EL, PBL, DL, SL, IBL	Epistemology of Education 6 Dimensions of knowledge 4Q principles and practice ADDIE, Knowledge construction SII, MII, Elaboration theory Research Assessment & Evaluation Learning Cycle, Design Framework	Sustenance follow-up for next 3 months Help for setting up “Engineering Research Practice Lab”
3	Perceptual Orientation for Corporate Readiness (PCR)	Careers towards Industrial Jobs	40 Hours 5 full-days	At the end of this workshop, participants would be able to: <ul style="list-style-type: none"> • Identify metacognitive self governance • Relate learning & work culture to growth potential • Relate practice to skill construction to job success 	EL, PBL, SL, IBL	Behaviorist, Humanist, IP Model, Activity Model, Situated, Constructivism, Truth, Honesty, Integrity & Values CDIO, Introspection, Self-actualization	Sustenance follow-up for next 3 months Help in setting up “Skill Development Council”

- AL – Active Learning, EL – Experiential Learning, PBL – Problem Based Learning, SL – Solution Based Learning, IBL – Inquiry Based Learning,

9. Library

The following books constitute the Library of VEDIC at the first phase and would increment over time.

S.N	Title	Author / Editor	ISBN	Publisher	Copies	e-Book INR	Print Edition INR
1.	Deep Learning : Beyond 21st Century Skills	James Bellanca	9781936763351	Solution Tree	1	1715	1713
2.	Age-Proofing Your Brain - 21 Key Factors You Can Control	Arlene Taylor	9781887307840	Sucess Resources International	1	219	2121
3.	Active Learning: 101 Strategies to Teach Any Subject	Mel Silberman	9780205178667	Pearson	1		3971
4.	Unforgettable Experiential Activities: An Active Training Resource	Melvin L. Silberman	9780470537145	John Wiley	1		3962
5.	Aligning for Learning: Strategies for Teaching Effectiveness	Donald H. Wulff	9781882982820	Jossey-Bass	1		4227
6.	Applying the Science of Learning	Richard E. Mayer	9780136117575	Pearson	1		3930
7.	Applying Cognitive Science to Education: Thinking and Learning in Scientific and Other Complex Domains	Frederick Reif	9780262515146	Bradford	1		1881
8.	Assessing Student Learning: A Common Sense Guide	Linda Suskie, Trudy W. Banta	9780470289648	Jossey-Bass	1	1888	2940
9.	Awaken the Learner	Darrell Scott, Robert Marzano	9780991374816	Marzano Research Laboratory	1	903	1133
10.	A Handbook for High Reliability Schools	Robert J. Marzano, Phil Warrick, Julia A. Simms	9780983351276	Solution Tree	1	904	1375
11.	A Handbook of Reflective and Experiential Learning: Theory and Practice	Jennifer A. Moon	9780415335164	Routledge	1	1434	13195
12.	A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives	Lorin W. Anderson, David R. Krathwohl, Peter W. Airasian, Kathleen A. Cruikshank, Richard E. Mayer, Paul R. Pintrich, James Raths, Merlin C. Wittrock	9780801319037	Pearson	1		4964
13.	A User's Guide to Thought and Meaning	Ray Jackendoff	9780199693207	Oxford University Press	1	188	895
14.	Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory	Juliet Corbin, Anselm Strauss	9781412906449	SAGE Publications	1		4850
15.	Becoming a Reflective Teacher	Robert J. Marzano, With Tina Boogren (Author), Tammy Heflebower (Author), Jessica Kanold-McIntyre (Author), Debra Pickering (Author)	9780983351238	Marzano Research Laboratory	1	1176	1878
16.	Behaviour Management in the Classroom: A Transactional Analysis Approach	Sandra Newell, David Jeffery	9781853468261	David Fulton	1	1996	3007
17.	Better Learning Through Structured Teaching: A Framework for the Gradual Release of Responsibility	Douglas Fisher, Nancy Frey	9781416616290	Association for Supervision & Curriculum Development	1	637	1505
18.	Beyond Learning by Doing: Theoretical Currents in Experiential Education	Jay W. Roberts	9780415882088	Routledge	1	2152	9619
19.	Beyond Reason and Tolerance: The Purpose and Practice of Higher Education	Robert J. Thompson	9780199969784	Oxford University Press	1	1302	4400
20.	Blend: In Seven Days or Less, Successfully Implement Blended Strategies in Your Classroom	Jenny Hooie	9780615741697	Instructional Design Innovations	1	274	2184
21.	Brilliant Teaching Assistant	Louise Burnham	9780273734420	Pearson	1		1515
22.	Cambridge Handbook of Engineering Education Research	Aditya Johri, Barbara M. Olds	9781107014107	Cambridge University Press	1	6660	6327
23.	Cheating Lessons: Learning from Academic Dishonesty	James M. Lang	9780674724631	Harvard Press	1	934	1591
24.	Child-Centred Education and Its Critics	John E M Darling	9781853962257	SAGE Publications	1		3359
25.	Classroom Assessment Techniques: A Handbook for College Teachers	Thomas A. Angelo, K. Patricia Cross	9781555425005	Jossey-Bass	1	2092	3525
26.	Coaching Classroom Instruction	Robert J. Marzano, Julia Simms	9780983351269	Marzano Research Laboratory	1	1175	1644
27.	Collaborative Learning Techniques: A Handbook for College Faculty	Elizabeth F. Barkley, K. Clair Howell Major, Patricia Cross	9781118761557	Jossey-Bass	1		5492
28.	Common Formative Assessment: A Toolkit for Professional Learning Communities	Kim Bailey, Chris Jakicic,	9781936765140	Solution Tree	1		1101
29.	Consciousness and the Social Brain	Michael S. A. Graziano	9780199928644	Oxford University Press	1	333	1913
30.	Contemplative Practices in Higher Education: Powerful	Daniel P. Barbezat, Mirabai	9781118435274	Jossey-Bass	1	1744	2252

	Methods to Transform Teaching and Learning	Bush					
31.	Contemporary Theories of Learning	Knud Illeris	9780415473446	Routledge	1	2138	3101
32.	Cognitive Psychology: Mind and Brain	Edward E. Smith, Stephen M. Kosslyn	9780131825086	Pearson	1	303	550
33.	Cognitive Load Theory	Jan L. Plass	9781444169157	Cambridge	1	1098	6852
34.	Cognitive Load Theory (Explorations in the Learning Sciences, Instructional Systems and Performance Technologies)	John Sweller, Paul Ayres, Slava Kalyuga	9781441981257	Springer	1	6381	12680
35.	Co-Teaching That Works: Structures and Strategies for Maximizing Student Learning	Anne M. Beninghof	9781118004364	Jossey-Bass	1	1026	1726
36.	Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses	L. Dee Fink	9780787960551	Jossey-Bass	1	1691	2135
37.	Creating Minds: An Anatomy of Creativity Seen Through the Lives of Freud, Einstein, Picasso, Stravinsky, Eliot, Graham, and Ghandi	Howard E. Gardner	9780465027743	Basic Books	1	494	799
38.	Critical Issues in Education: An Anthology of Readings	Eugene F. Provenzo	9781412904773	SAGE Publications	1		4288
39.	Deschooling Society	Ivan Illich	9780714508795	Marion Boyars Publishers	1	192	1192
40.	Designing and Teaching Learning Goals and Objectives: Classroom Strategies That Work	Robert J. Marzano	9780982259207	Marzano Research Laboratory	1	904	1374
41.	Developing Metrics for Assessing Engineering Instruction: What Gets Measured is What Gets Improved	National Research Council	9780309137829	The National Academic Press	1		1644
42.	Differentiation and the Brain: How Neuroscience Supports the Learner-Friendly Classroom	David A. Sousa, Carol Ann Tomlinson	9781935249597	Solution Tree	1	999	1799
43.	Discipline-Based Education Research: Understanding and Improving Learning in Undergraduate Science and Engineering	Susan R. Singer, Natalie R. Nielsen, Heidi A. Schweingruber	9780309254113	The National Academic Press	1	2433	5316
44.	Discussion as a Way of Teaching: Tools and Techniques for Democratic Classrooms	Stephen D. Brookfield	9780787978082	Jossey-Bass	1	1685	2135
45.	Educating the Engineer of 2020: Adapting Engineering Education to the New Century	National Research Council	9780309096492	The National Academic Press	1	642	2155
46.	Educational Technology, Teacher Knowledge, and Classroom Impact: A Research Handbook on Frameworks and Approaches	Robert N. Ronau, Christopher R. Rakes, Margaret L. Niess	9781609607500	IGI Global	1		14310
47.	Educational Psychology	Anita Woolfolk	9780132613163	Pearson			665
48.	Educational Psychology: Developing Learners	Jeanne Ellis Ormrod	9780137001149	Pearson	1		5255
49.	Education and Democracy in the 21st Century	Nel Noddings	9780807753965	Teachers College Press	1	1087	3594
50.	Effective Group Discussion: Theory and Practice	Gloria Galanes, Katherine Adams	9780073534343	McGraw-Hill	1		580
51.	Effective Learning and Teaching in Engineering	Caroline Baillie, Ivan Moore	9780415334891	Routledge	1	3303	4575
52.	Effective Supervision: Supporting the Art and Science of Teaching	Robert J. Marzano, Tony Frontier, David Livingston	9781416611554	Heinle ELT	1	741	1858
53.	Efficiency in Learning: Evidence-Based Guidelines to Manage Cognitive Load	Ruth C. Clark, Frank Nguyen, John Sweller	9780787977283	Pfeiffer	1	2839	5010
54.	Embedded Formative Assessment	Dylan Wiliam	9781934009307	Solution Tree	1	613	1852
55.	Enhancing the Art & Science of Teaching With Technology	Sonny Magana, Robert Marzano	9780985890247	Marzano Research Lab	1	1004	1398
56.	Enhancing Adult Motivation to Learn: A Comprehensive Guide for Teaching All Adults	Raymond J. Wlodkowski	9780787995201	Jossey-Bass	1	1717	3131
57.	Engineering Education In India	Rangan Banerjee, Vinayak P. Muley	9780230640009	Macmillan	1		495
58.	Engaging Students as Partners in Learning and Teaching: A Guide for Faculty	Alison Cook-Sather, Catherine Bovill, Peter Felten	9781118434581	Jossey-Bass	1	1742	2200
59.	Engaging Imagination: Helping Students Become Creative and Reflective Thinkers	Alison James, Stephen D. Brookfield	9781118409473	Jossey-Bass	1	1691	2418
60.	Engaging Ideas: The Professor's Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom	John C. Bean, Maryellen Weimer	9780470532904	Jossey-Bass	1	1742	2499
61.	Essentials of Negotiation	Roy Lewicki, Bruce Barry, David Saunders	9780073530369	McGraw-Hill	1		2168
62.	Ethical Leadership and Decision Making in Education: Applying Theoretical Perspectives to Complex Dilemma	Joan Poliner Shapiro, Jacqueline A. Stefkovich	9780415874595	Routledge	1	358	10050
63.	Evaluating Faculty Performance: A Practical Guide to Assessing Teaching, Research, and Service	Peter Seldin	9781933371047	Jossey-Bass	1		3354
64.	Evidence-Based Teaching: New Directions for Teaching and Learning	William Buskist, James E. Groccia	9781118180686	Jossey-Bass	1	1204	1726
65.	Experience And Education	John Dewey	9780684838281	Free Press	1	434	509
66.	Experiential Learning: A Best Practice Handbook for	Colin Beard, John P. Wilson	9780749444891	Kogan Page	1		389

	Educators and Trainers						
67.	Exploring Mathematics and Science Teachers' Knowledge: Windows into teacher thinking	Hamsa Venkat, Marissa Rollnick, John Loughran, Mike Askew	9780415713870	Routledge	1	5585	5878
68.	Facilitating Organization Change: Lessons from Complexity Science	Edwin E. Olson, Glenda H. Eoyang	9780787953300	Pfeiffer	1	2653	3962
69.	Falsification of Type: Its Jungian and Physiological Foundations & Mental, Emotional and Physiological Costs	Katherine Benziger	9781453743966	CreateSpace Independent Publishing Platform	1		2438
70.	Feedback that Sticks: The Art of Effectively Communicating Neuropsychological Assessment Results	Karen Spangenberg Postal, Kira Armstrong	9780199765690	Oxford University Press	1	713	3064
71.	Flipped Learning: Gateway to Student Engagement	Jonathan Bergmann, Aaron Sams	9781564843449	International Society for Technology in Education (ISTE)	1	611	984
72.	Flip Your Classroom Reach Every Student in Every Class Every Day	Jonathan Bergmann, Aaron Sams	9781564843159	International Society for Technology in Education (ISTE)	1	299	1409
73.	Flipping 2.0: Practical Strategies for Flipping Your Class	Jason Bretzmann	9780615824079	Bretzmann Group LLC	1	798	1924
74.	Frames of Mind: The Theory of Multiple Intelligences	Howard Gardner	9780465024339	Basic Books	1		1045
75.	Fifty Modern Thinkers on Education: From Piaget to the Present Day	Liora Bresler, David Cooper, Joy Palmer	9780415224093	Routledge	1	1267	2440
76.	Focus: Elevating the Essentials to Radically Improve Student Learning	Houghton Mifflin Harcourt	9781416611301	Association for Supervision & Curriculum Development	1		1893
77.	Foundations of Human Memory	Michael Jacob Kahana	9780199387649	Oxford University Press	1	547	2823
78.	Implementing the Four Levels: A Practical Guide for Effective Evaluation of Training Programs	Donald L Kirkpatrick, James D Kirkpatrick	9781576754542	Berrett-Koehler Publishers	1	1250	2645
79.	John Dewey and the Art of Teaching: Toward Reflective and Imaginative Practice	Douglas J. Simpson, Michael J. B. Jackson, Judy C. Aycok	9781412909037	SAGE Publication	1	1949	5214
80.	Handbook of Technological Pedagogical Content Knowledge (TPCK) for Educators	The AACTE Committee on Innovation and Technology	9780805863567	Routledge	1	3753	10000
81.	Handbook of Research on Educational Communications and Technology	J. Michael Spector, M. David Merrill, Jan Elen, M. J. Bishop	9781461431848	Springer	1		15940
82.	Handbook of Research on E-Learning Standards and Interoperability: Frameworks and Issues	Fotis Lazarinis, Steve Green, Elaine Pearson	9781616927899	IGI Global	1		16828
83.	Holistic thinking: Creating innovative solutions to complex problems	Dr Joseph E Kasser	9781482539011	CreateSpace Independent Publishing	1	399	2543
84.	How the Brain Learns	David A. Sousa	9781412997973	Corwin	1	1524	2601
85.	How the Mind Works	Steven Pinker	9780393334777	W. W. Norton & Company	1	445	550
86.	How to Assess Authentic Learning	Kathleen (Kay) B. Burke	9781412962797	Corwin	1	959	9443
87.	How to Assess Higher-Order Thinking Skills in Your Classroom	Susan M. Brookhart	9781416610489	Association for Supervision & Curriculum Development	1	640	1563
88.	How to Create and Use Rubrics for Formative Assessment and Grading	Susan M. Brookhart	9781416615071	Association for Supervision & Curriculum Development	1	716	1743
89.	How To Develop Self-Confidence And Influence People By Public Speaking	Dale Carnegie	9780671746070	Pocket Books	1		767
90.	How to Design and Teach a Hybrid Course: Achieving Student-Centered Learning through Blended Classroom, Online and Experiential Activities	Jay Caulfield	9781579224233	Stylus Publishing	1		1505
91.	How to Give Effective Feedback to Your Students	Susan M. Brookhart	9781416607366	Association for Supervision & Curriculum Development	1	510	1252
92.	How to Teach Adults: Plan Your Class, Teach Your Students, Change the World, Expanded Edition	Dan Spalding	9781118841365	Jossey-Bass	1	1180	1483
93.	How Learning Works: Seven Research-Based Principles for Smart Teaching	Susan A. Ambrose, Michael W. Bridges, Michele DiPietro, Marsha C. Lovett, Marie K. Norman, Richard E. Mayer	9780470484104	Jossey-Bass	1	1753	2252
94.	How We Think	John Dewey	9781482398809	CreateSpace	1	192	450

				Independent Publishing Platform			
95.	I Read It, but I Don't Get It: Comprehension Strategies for Adolescent Readers	Cris Tovani	9781571100894	Stenhouse Publishers	1	888	2111
96.	Ideas That Work in College Teaching	Robert L. Badger	9780791472200	State University of New York Press	1		3930
97.	Immersive Learning	Koreen Olbrish Pagano	9781562868215	ASTD	1	1690	2254
98.	ISD From the Ground Up: A No-Nonsense Approach to Instructional Design	Chuck Hodell	9781562867430	ASTD	1	1998	2823
99.	Introduction To Rubrics: An Assessment Tool To Save Grading Time, Convey Effective Feedback and Promote Student Learning	Dannelle D. Stevens, Antonia J. Levi, Barbara E. Walvoord	9781579225889	Stylus Publishing	1		8368
100.	Invent To Learn: Making, Tinkering, and Engineering in the Classroom	Sylvia Libow Martinez, Gary S. Stager	9780989151108	Constructing Modern Knowledge Press	1	399	2202
101.	In touch with the future: The sense of touch from cognitive neuroscience to virtual reality	Alberto Gallace, Charles Spence	9780199644469	Oxford University Press	1	1307	5888
102.	Leader of Leaders: The Handbook for Principals on the Cultivation, Support, and Impact of Teacher-Leaders	Hal Portner, William E. Collins	9780132736411	Pearson	1		2011
103.	Leading for Instructional Improvement: How Successful Leaders Develop Teaching and Learning Expertise	Stephen Fink, Anneke Markholt	9780470542750	Jossey-Bass	1	1327	1467
104.	Leading Adult Learning: Supporting Adult Development in Our Schools	Eleanor (Ellie) Drago-Severson	9781412950725	Corwin	1	1930	10101
105.	Learnability and Cognition: The Acquisition of Argument Structure	Steven Pinker	9780262518406	MIT Press	1		4658
106.	Learning in Adulthood: A Comprehensive Guide	Sharan B. Merriam, Rosemary S. Caffarella, Lisa M. Baumgartner	9780787975883	Jossey-Bass	1		1759
107.	Learning to Lead: A Workbook on Becoming a Leader	Warren Bennis, Joan Goldsmith	9780465018864	Basic Books	1	638	1751
108.	Leaving the Lectern: Cooperative Learning and the Critical First Days of Students Working in Groups	Dean A. McManus	9781882982851	Jossey-Bass	1		2410
109.	Learner Centered Teaching – Five Key Changes to Practice	Maryellen Weimer	9781118119280	Jossey-Bass	1	1691	2134
110.	Make It Stick: The Science of Successful Learning	Peter C. Brown, Henry L. Roediger III, Mark A. McDaniel	9780674729018	Belknap Press	1	1012	1782
111.	Making Thinking Visible: How to Promote Engagement, Understanding, and Independence for All Learners	Ron Ritchhart, Mark Church, Karin Morrison	9780470915516	Jossey-Bass	1	1026	17262
112.	McKeachie's Teaching Tips	Marilla Svinicki, Wilbert J. McKeachie	9781133936794	Cengage Learning	1		2299
113.	Mind Maps: Quicker Notes, Better Memory, and Improved Learning	Michael Taylor	9781495328794	CreateSpace Independent Publishing	1	399	789
114.	Measurement and Assessment in Teaching	M. David Miller, Robert L. Linn, Norman E. Gronlund	9780132408936	Pearson	1	6788	11864
115.	Moodle Course Design Best Practices	Susan Smith Nash, Michelle Moore	9781783286812	Packt Publishing	1	570	1803
116.	Multiple Intelligences: New Horizons in Theory and Practice	Howard E. Gardner	9780465047680	Basic Books	1	531	799
117.	Notice and Note: Strategies for Close Reading	Kylene Beers, Robert E Probst	9780325046938	Heinemann	1		2614
118.	On Course: A Week-by-Week Guide to Your First Semester of College Teaching	James M. Lang	9780674047419	Harvard University Press	1	638	6472
119.	On Excellence in Teaching	Robert J. Marzano	9781934009581	Solution Tree	1	1265	1497
120.	Open To Outcome: A Practical Guide For Facilitating & Teaching Experiential Reflection	Micah Jacobson, Mari Ruddy	9781885473592	Wood N Barnes	1	1280	1783
121.	Perceptual Learning	Manfred Fahle, Tomaso A. Pogg	9780262062213	Bradford Book	1		4093
122.	Philosophy of Education: The Key Concepts	John Gingell, Christopher Winch	9780415428934	Routledge	1	252	12011
123.	Philosophy of Education	Nel Noddings	9780813345314	Westview Press	1	982	2753
124.	Positive Psychology in Practice	P. Alex Linley, Stephen Joseph	9780471459064	Wiley	1	4033	6534
125.	Powerful Techniques for Teaching Adults	Stephen D. Brookfield	9781118017005	Jossey-Bass	1		2565
126.	Psychology of Learning for Instruction	Marcy P. Driscoll	9780205375196	Pearson	1		1899
127.	Preparing Instructional Objectives: A Critical Tool in the Development of Effective Instruction	Robert F. Mager	9781879618039	Center for Effective Performance	1		5493
128.	Problem-Based Learning: An Inquiry Approach	John F. Barel	9781412950046	Corwin	1	1705	8731
129.	Reinforcement Learning: An Introduction	Richard S. Sutton, Andrew G. Barto	9780262193986	Bradford Book	1	3448	3783

130.	Rethinking Engineering Education: The CDIO Approach	Edward F. Crawley, Johan Malmqvist, Sören Östlund	9780387382876	Springer	1	6471	6812
131.	Research on Teacher Thinking: Understanding Professional Development	James Calderhead, Pam Denicolo, Christopher Day	9780415698825	Routledge	1	1322	6260
132.	Research in Education: Evidence-Based Inquiry	James McMillan, Sally Schumacher	9781292022673	Pearson	1	263	14172
133.	Reflective Teaching: An Introduction	Kenneth M. Zeichner, Daniel P. Liston	9780415826617	Routledge	1		1793
134.	Revolutionizing Education through Technology: The Project RED Roadmap for Transformation	Thomas W. Greaves, Jeanne Hayes, Leslie Wilson, Michael Glielniak, Eric L. Peterson	9781564843227	International Society for Technology in Education	1	299	864
135.	Rigorous Reading: 5 Access Points for Comprehending Complex Texts	Nancy Frey, Douglas Fisher	9781452268132	Corwin	1	1522	2514
136.	Schools That Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares About Education	Peter M. Senge, Nelda Cambron-McCabe, Timothy Lucas, Bryan Smith, Janis Dutton	9780385518222	Crown Business	1	553	1934
137.	Student Engagement Techniques: A Handbook for College Faculty	Elizabeth F. Barkley	9780470281918	Jossey-Bass	1	1742	2547
138.	Successful Science and Engineering Teaching in Colleges and Universities	Calvin S. Kalman	9781933371160	Jossey-Bass	1	9572	13270
139.	Synaptic Self: How Our Brains Become Who We Are	Joseph LeDoux	9780142001783	Penguin Books	1	578	5184
140.	Teach Like a Pirate: Increase Student Engagement, Boost Your Creativity, and Transform Your Life as an Educator	Dave Burgess	9780988217607	Dave Burgess Consulting	1	399	1616
141.	Teaching Argumentation: Activities and Games for the Classroom	Katie Rogers	9781935249306	Solution Tree	1	1176	1630
142.	Teaching and Assessing 21st Century Skills: The Classroom Strategies Series	Robert J. Marzano, Tammy Heflebower	9780983351207	Marzano Research Laboratory	1	1164	1883
143.	Teaching, Learning and Research in Higher Education: A Critical Approach	Mark Tennant, Cathi McMullen, Dan Kaczynski	9780415962636	Routledge	1	2922	3229
144.	Teacher Evaluation That Makes a Difference: A New Model for Teacher Growth and Student Achievement	Robert J. Marzano, Michael D. Toth	9781416615736	Association for Supervision & Curriculum Development	1	737	1761
145.	Teaching for Critical Thinking: Tools and Techniques to Help Students Question Their Assumptions	Stephen D. Brookfield	9780470889343	Jossey-Bass	1	1690	2135
146.	Teaching for Experiential Learning: Five Approaches That Work	Scott D. Wurdinger, Julie A. Carlson	9781607093688	R&L Education	1	1092	5732
147.	Teaching for Quality Learning at University	John Biggs, Catherine Tang	9780335242757	Open University Press	1	3038	3198
148.	Teaching Naked: How Moving Technology Out of Your College Classroom Will Improve Student Learning	José Antonio Bowen	9781118110355	Jossey-Bass	1	1588	2077
149.	Teaching STEM in the Early Years: Activities for Integrating Science, Technology, Engineering, and Mathematics	Sally Moomaw	9781605541211	Redleaf Press	1	1446	1522
150.	Teaching Strategies for Active Learning: Five Essentials for Your Teaching Plan	Donna E. Walker Tileston	9780761938552	Corwin	1	975	4530
151.	Ten Best Teaching Practices: How Brain Research and Learning Styles Define Teaching Competencies	Donna E. Walker Tileston	9781412973939	Corwin	1	1105	1783
152.	Team-Based Learning: A Transformative Use of Small Groups in College Teaching.	Larry K. Michaelsen, Arletta Bauman Knight, L. Dee Fink	9781579220860	Stylus Publishing	1		1929
153.	Thanks for the Feedback: The Science and Art of Receiving Feedback Well	Douglas Stone, Sheila Heen	9780670014668	Viking Adult	1		1313
154.	The Adult Learner	Malcolm S. Knowles, Elwood F. Holton III, Richard A. Swanson	9781856178112	Taylor & Francis	1	2527	3397
155.	The Art and Craft of College Teaching: A Guide for New Professors and Graduate Students	Robert Rotenberg	9781598745344	Left Coast Press	1	1809	6583
156.	The Behavior Code A Practical Guide to Understanding and Teaching the Most Challenging Students	Jessica Minahan Nancy Rappaport	9781612501369	Harvard Education Press	1		2285
157.	The BTSA User Manual 2nd Edition: A Guide to the Development, Validation and Use of the Benziger Thinking Styles Assessment	Katherine Benziger	9781453743973	CreateSpace Independent Publishing	1		2738
158.	The Blackwell Guide to the Philosophy of Education	Nigel Blake, Paul Smeyers, Richard D. Smith, Paul Standish	9780631221197	Wiley-Blackwell	1	732	975
159.	The Cambridge Handbook of Cognitive Science	Keith Frankish, William Ramsey	9780521691901	Cambridge University Press	1	937	2534
160.	The Challenge of Reframing Engineering Education	Dennis Sale	9789814560283	Springer	1	6165	6490
161.	The Cognitive Neuroscience of Memory: An Introduction	Howard Eichenbaum	9780199778614	Oxford University	1	855	4406

				Press			
162.	The Conditions of Learning: Training Applications	Robert M. Gagne, Karen L. Medsker	9780155021068	Wadsworth Publishing	1		20,032
163.	The Core Six: Essential Strategies for Achieving Excellence with the Common Core	Matthew J. Perini, Harvey F. Silver	9781416614753	Heinle ELT	1		965
164.	The Course Syllabus: A Learning-Centered Approach	Judith Grunert O'Brien, Barbara J. Millis, Margaret W. Cohen, Robert M. Diamond	9780470197615	Jossey-Bass	1	1294	1362
165.	The Courage to Teach: Exploring the Inner Landscape of a Teacher's Life, 10th Anniversary Edition	Parker J. Palmer	9780787996864	Jossey-Bass	1	671	3407
166.	The Fifth Discipline: The Art & Practice of The Learning Organization	Peter M. Senge	9780385517256	Doubleday	1		1099
167.	The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization	Peter M. Senge	9780385472562	Crown Business	1	553	1400
168.	The Gamification of Learning and Instruction	Karl M. Kapp	9781118096345	ASTD	1	2552	4363
169.	The Handbook of Transformative Learning: Theory, Research, and Practice	Edward W. Taylor, Patricia Cranton	9780470590720	Jossey-Bass	1	3318	5210
170.	The Having of Wonderful Ideas: And Other Essays on Teaching and Learning	Eleanor Duckworth	9780807747308	Teachers College Press	1	981	1705
171.	The Highly Engaged Classroom	Robert Marzano, Debra Pickering, Tammy Heflebower	9780982259245	Marzano Research Laboratory	1	608	1412
172.	The Joy of Teaching: A Practical Guide for New College Instructors	Peter Filene, Ken Bain	9780807856031	The University of North Carolina Press	1	922	3982
173.	The New Landscape of Mobile Learning: Redesigning Education in an App-Based World	Charles Miller, Aaron Doering	9780415539241	Routledge	1	1890	9118
174.	The New Science of Learning: How to Learn in Harmony With Your Brain	Terry Doyle, Todd Zakrajsek	9781620360095	Stylus Publishing	1		6230
175.	The Mind Map Book: How to Use Radiant Thinking to Maximize Your Brain's Untapped Potential	Tony Buzan, Barry Buzan	9780452273221	Plume	1		1308
176.	The Power of Problem-Based Learning	Barbara J. Duch, Susan E. Groh, Deborah E. Allen	9781579220372	FALMER/KP	1		2470
177.	The Philosophy of Information	Luciano Floridi	9780199232390	Oxford University Press	1		5125
178.	The Psychology of Intelligence	Jean Piaget	9780415254014	Routledge	1		3765
179.	The Self and Self-Knowledge	Annalisa Coliva	9780199590650	Oxford University Press	1		5086
180.	The Quick & Easy Way to Effective Speaking	Dale Carnegie	9780671724009	Pocket Books	1	72	250
181.	The Skillful Teacher: On Technique, Trust, and Responsiveness in the Classroom	Stephen D. Brookfield	9780787980665	Jossey-Bass	1	671	2583
182.	The Systematic Design of Instruction	Walter Dick, Lou Carey, James O. Carey	9780205585564	Pearson	1		4662
183.	Theories of Childhood, Second Edition: An Introduction to Dewey, Montessori, Erikson, Piaget & Vygotsky	Carol Garhart Mooney	9781605541389	Redleaf Press	1	602	634
184.	Thinking Through Project-Based Learning: Guiding Deeper Inquiry	Jane I. Krauss, Suzanne K. Boss	9781452202563	Corwin	1	1262	2695
185.	Thought and Language	Lev S. Vygotsky, Alex Kozulin	9780262517713	The MIT Press	1		978
186.	To Sir with Love	E. R. Braithwaite	9780515105193	Jove	1	59	199
187.	Transforming Learning with New Technologies	Robert W. Maloy, Ruth-Ellen Verock-O'Loughlin, Sharon A. Edwards, Beverly P. Woolf	9780133155716	Pearson	1		3488
188.	Transformative Assessment	W. James Popham	9781416606673	Association for Supervision & Curriculum Development	1		1664
189.	Transformative Learning and Identity	Knud Illeris	9780415838900	Routledge	1	2351	9419
190.	The Handbook of Transformative Learning: Theory, Research, and Practice	Edward W. Taylor, Patricia Cranton	9780470590720	Jossey-Bass	1	3318	5210
191.	Training Games: Simple and Effective Techniques to Engage and Motivate Learners	Steve Sugar, Jennifer Whitcomb	9781562864514	ASTD	1		1331
192.	Thriving in Mind: The Natural Key to Sustainable Neurofitness	Katherine Benziger	9781492802471	CreateSpace Independent Publishing	1		2816
193.	Tools for Teaching	Barbara Gross Davis	9780787965679	Jossey-Bass	1	2228	3766
194.	Understanding by Design: Professional Development Workbook	Jay McTighe	9780871208552	Association for Supervision and Curriculum Development	1		1728
195.	Understanding Emotions in the Classroom	Claudia Shelton, Robin Stern	9781887943659	Dude Publishing	1		3158
196.	Understanding Motivation and Emotion	Johnmarshall Reeve	9780470392232	Wiley	1		2616

197	Understanding Learning Styles: Making a Difference for Diverse Learners	Jeanna Sheve, Kelli Allen, Vicki Nieter	9781425800468	Shell Education	1		1579
198	University Teaching in Focus: A learning-centred approach	Lynne Hunt, Denise Chalmers	9780521588492	Routledge	1	1620	2544
199	Using Common Core Standards to Enhance Classroom Instruction & Assessment	Robert J. Marzano, David C. Yanoski, Jan K. Hoegh, Julia A. Simms	9780983351290	Marzano Research Laboratory	1	1165	1656
200	Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement	John Hattie	9780415476188	Routledge	1	2675	9989
201	Visible Learning and the Science of How We Learn	John Hattie, Gregory C. R. Yates	9780415704991	Routledge	1	2047	2202
202	Vygotsky's Educational Theory in Cultural Context	Alex Kozulin, Boris Gindis, Vladimir S. Ageyev, Suzanne M. Miller	9780521528832	Cambridge University Press	1	1982	8485
203	What the Best College Students Do	Ken Bain	9780674066649	Belknap Press	1	605	1653
204	Web 2.0 How-to for Educators	Gwen Solomon, Lynne Schrum	9781564843517	International Society for Technology in Education	1		4010
205	Your Brain Has a Bent - Not a Dent	Arlene R Taylor, W. Eugene Brewer	9781887307758	Success Resources International	1	278	2713
TOTAL							7,52,746

10. Conclusion

The VEDIC will be a powerful mechanism for engaging students, faculty, and staff across campuses, their disciplines and professions, and their own learning and career development processes.

This centre would conduct both fundamental and applied research in the field of education that suits to improve learning and educational practices in the educational streams of arts, science, medicine and engineering.

The Center can provide a model for the Vishnu Group of Institutions, in achieving excellence toward integrating academic and student support services by placing the student experience at the heart of its activities and empowering students to become institutional and community leaders in all areas of the institution's functioning.

In addition, this Center will serve as liaison to both the broader community and the landscape of higher education itself.

This will lead to increased persistence and graduation rates by establishing students, faculty and staff as co-participants within the very activities and programs central to an improved education and the success of its constituents.



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

(**వేదోత్**)

Hyderabad, Telangana, India

14 - 16 April 2016



Workshop on Scientific Educational Practices

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

14 – 16 April 2016

Facilitators



Rajeev Sukumaran (Facilitator)
Senior Advisor, Teaching Learning Centre
Indian Institute of Technology Madras
email : rajeev@wmail.iitm.ac.in
phone : 91-9790925489



Christhu Raj M R (Facilitator)
Research Officer, University Learning Centre
SRM University - Kattankulathur
email : christhuraj.m@ktr.srmuniv.ac.in
phone : 91-9943973709

Participants

No	Name	Department	Institution	email	Phone No
1	K. Eswara Prasad	Electronics	Padmasri Dr. B V Raju Institute of Computer Education	ekanakalla@gmail.com	9490675930
2	Ch. Satyanarayana	Mathematics	Padmasri Dr. B V Raju Institute of Computer Education	csnmaths@gmail.com	9951335558
3	B. Rajitha	Physics	BVRIT Hyderabad College of Engineering for Women	rajitha.b@bvrithyderabad.edu.in	9642342220
4	B. Anna Tanuja Safala	Chemistry	BVRIT Hyderabad College of Engineering for Women	tanujasafala.b@bvrithyderabad.edu.in	9030916646
5	B. Sreekala	Mathematics	BVRIT Hyderabad College of Engineering for Women	sreekala.b@bvrithyderabad.edu.in	9493019971
6	J. Manoj Kumar	Mathematics	BVRIT Hyderabad College of Engineering for Women	manoj.jangitti@gmail.com	9247164714
7	T. Mounika	Environmental Science	BVRIT Hyderabad College of Engineering for Women	mouni1289@gmail.com	9494877559
8	K. Nagendrakumar	Mechanical	BVRIT Hyderabad College of Engineering for Women	nagendra9119@gmail.com	9912521818
9	M. Gngadhar Tilak	Mechanical	BVRIT Hyderabad College of Engineering for Women	tilakgoud@gmail.com	9912333223
10	D. Chaya Kumari	Mathematics	BVRIT Hyderabad College of Engineering for Women	chayakumari.divakarla@gmail.com	9666699505
11	M. Prameela	Electrical & Electronics Eng.,	Padmasri Dr. B. V. Raju Institute of Technology	prameela.m@bvrit.ac.in	9963289031
12	Kishore Vennela	Electronics & Communication Eng.,	Padmasri Dr. B. V. Raju Institute of Technology	kishore.vennela@bvrit.ac.in	7893847227
13	D.V.R. Praveen	Mechanical	Padmasri Dr. B. V. Raju Institute of Technology	praveen.dvr@bvrit.ac.in	9949784751
14	Potnuri Ramesh	Chemical Engineering	Padmasri Dr. B. V. Raju Institute of Technology	ramesh.p@bvrit.ac.in	9440353867
15	P. Sam Babu	English	Padmasri Dr. B. V. Raju Institute of Technology	sambabu.p@bvrit.ac.in	9949793230
16	T. Shyam Prasad	Information Technology	Padmasri Dr. B. V. Raju Institute of Technology	shyamprasad.t@bvrit.ac.in	9949660889
17	M. Ram Reddy	Chemistry	Padmasri Dr. B. V. Raju Institute of Technology	ramreddy.m@bvrit.ac.in	8500201510
18	E. Santhosh	Mathematics	Padmasri Dr. B. V. Raju Institute of Technology	santhosh.e@bvrit.ac.in	
19	J. Venkata Ramana	Physics	Padmasri Dr. B. V. Raju Institute of Technology	venkataramana.jeedi@bvrit.ac.in	9963683672
20	Niladni Day	Information Technology	Padmasri Dr. B. V. Raju Institute of Technology	niladni.day@bvrit.ac.in	9542601772
21	Ramesh Babu J	Computer Science & Engineering	Padmasri Dr. B. V. Raju Institute of Technology	rmeshbabu.j@bvrit.ac.in	9948961112
22	Y. Rajesh Kumar	Civil	Padmasri Dr. B. V. Raju Institute of Technology	rajeshkumar.y@bvrit.ac.in	9704071721
23	R. Kanaka Raju	Mechanical	Smt B. Seetha Polytechnic	hairapaka@gmail.com	9989089392
24	K. Dheeraj Varma	Pharmacy	Sri Vishnu College of Pharmacy	dheeraj.svcp@gmail.com	9866158069
25	K.T. Sunil Kumar	Pharmacy	Sri Vishnu College of Pharmacy	sunil@svcp.edu.in	8125147976
26	K. Vijaya Lakshmi	Mathematics	Shri Vishnu Engineering College for Women	vijayaram.kuchi@gmail.com	9581657590
27	G. Rama Krishna Raju	Physics	Shri Vishnu Engineering College for Women	raju.gitamite@gmail.com	9676353784
28	V. Naganjaneyulu	Chemistry	Shri Vishnu Engineering College for Women	nagavakamalla041@gmail.com	9542121761
29	J. Srinivasu	Physics	Shri Vishnu Engineering College for Women	j.venkat@svecw.edu.in	9866850201
30	D. Ravi Kiran	Mathematics	Shri Vishnu Engineering College for Women	duvvuriravikiran@svecw.edu.in	9912520723
31	Y. Phani	Mathematics	Shri Vishnu Engineering College for Women	phanni.maths@gmail.com	9849052452
32	M.V. Ramesh	PHD	Vishnu Dental College	drmvramesh4141@gmail.com	9949430131
33	N. Rajesh	Oral Medicine	Vishnu Dental College	rajeshcar09@gmail.com	9885067499
34	S. Sandhya Rani	Pharmacy	Vishnu Inst. of Pharmaceutical Education & Research	sandhyarni.s@vipr.ac.in	7674843119
35	B. Lakshmi Satya	Pharmacy	Vishnu Inst. of Pharmaceutical Education & Research	lakshmi.satya.b@vipr.ac.in	9849819860
36	B. Tirumala Rao	Physics	Vishnu Institute of Technology	btra02006@gmail.com	9542568585
37	G. Rama Swamy	Chemistry	Vishnu Institute of Technology	grswamy123@gmail.com	9440459838
38	Rajesh Yadav M	Physics	Vishnu Institute of Technology	rajesh.sairam.21@gmail.com	9948292947
39	R.S. Durga Rao	Mathematics	Vishnu Institute of Technology	rs.durga1979@gmail.com	9948292947
40	K. Venu Gopal	Mathematics	Vishnu Institute of Technology	venugopal.kudupudi@gmail.com	9440606373
41	G.V. Lakshminanth	Physics	Vishnu Institute of Technology	kanthgvl@gmail.com	9885341780

Contents

	Page No
Facilitators	
Participants	
1 Programme Schedule	5
2 Presentations	
2.1 Brain and Learning, Coexistence, Cooperation..... <i>Rajeev Sukumaran & Christhu Raj M R</i>	6
2.2 Learning and its Components, Qualities of Teachers	16
2.3 Memory & Intelligence, Knowledge Construction..... <i>Rajeev Sukumaran & Christhu Raj M R</i>	20
2.4 Thoughts, Learning, Intelligence, Personality..... <i>Rajeev Sukumaran & Christhu Raj M R</i>	24
2.5 Pedagogy and its Components, Theories in Learning..... <i>Rajeev Sukumaran & Christhu Raj M R</i>	27
2.6 Active Learning, Learning Outcomes..... <i>Rajeev Sukumaran & Christhu Raj M R</i>	35
2.7 Curricula Analyzing and Planning, Creating Learning Evaluation..... <i>Rajeev Sukumaran & Christhu Raj M R</i>	39
2.8 Cone of Learning, Instructional System Design..... <i>Rajeev Sukumaran & Christhu Raj M R</i>	44
2.9 Pillars to Succeed..... <i>Rajeev Sukumaran & Christhu Raj M R</i>	49
3 Feedback.....	55

Schedule

Day – 1 (14 April 2016)

Time	Sessions	Outcome
09.00 am - 09.05 am	Inauguration	
09.05 am - 10.30 am	Brain and Learning Coexistence, Cooperation	<i>Identify how brain learns and how we socialize</i>
10.30 am - 10.45 am	Tea	
10.45 am - 12.30 pm	Learning and its Components Qualities of Teachers	<i>Elements involved in the learning process and how teachers build quality</i>
12.30 pm - 01.15 pm	Lunch	
01.15 pm - 02.45 pm	Memory & Intelligence Knowledge Construction	<i>Identify how knowledge gets constructed and converts into intelligence</i>
02.45 pm - 03.00 pm	Tea	
03.00 pm - 05.00 pm	Thoughts, Learning, Intelligence, Personality	<i>Identify our Thoughts, Learning Styles, Intelligences and Personality</i>

Day – 2 (15 April 2016)

Time	Sessions	Outcome
09.00 am - 10.30 am	Pedagogy & its Components Theories in Learning	<i>List the educational theories and its components</i>
10.30 am - 10.45 am	Tea	
10.45 am - 12.30 pm	Active Learning Learning Outcomes	<i>Identify how learning outcomes can be achieved through active modes</i>
12.30 pm - 01.15 pm	Lunch	
01.15 pm - 02.45 pm	Curricula Analyzing & Planning Creating Learning Evaluation	<i>Analyze elements in curricula and to construct a learning plan</i>
02.45 pm - 03.00 pm	Tea	
03.00 pm - 05.00 pm	Cone of Learning Instructional System Design	<i>Recognize the learning retention techniques and instructional design</i>

Day – 3 (16 April 2016)

Time	Sessions	Outcome
09.00 am - 10.30 am	Learning Demonstrations Reflective Thinking for Teaching	<i>Demonstrate teaching incorporating pedagogical aspects</i>
10.30 am - 10.45 am	Tea	
10.45 am - 12.30 pm	Learning Demonstrations Reflective Thinking for Teaching	<i>Demonstrate teaching incorporating pedagogical aspects</i>
12.30 pm - 01.15 pm	Lunch	
01.15 pm - 02.45 pm	Pillars to Succeed	<i>Identify the pillars that helps us succeed in our career and jobs</i>
02.45 pm - 03.00 pm	Tea	
03.00 pm - 04.50 pm	Personal Achievement Strategies	<i>Visualize from experts the secret to achieve personal success</i>
04.50 pm - 05.00 pm	Valediction	

Workshop on Scientific Educational Practices

Rajeev Sukumaran

Teaching Learning Centre, IIT Madras, Chennai

&

Christhu Raj M R

University Learning Centre, SRM University, Chennai

Purpose / Rationale

Each one of us could write atleast 5 reasons as to

What is our expectation from this workshop ?

When... ?

Why... ?

Where... ?

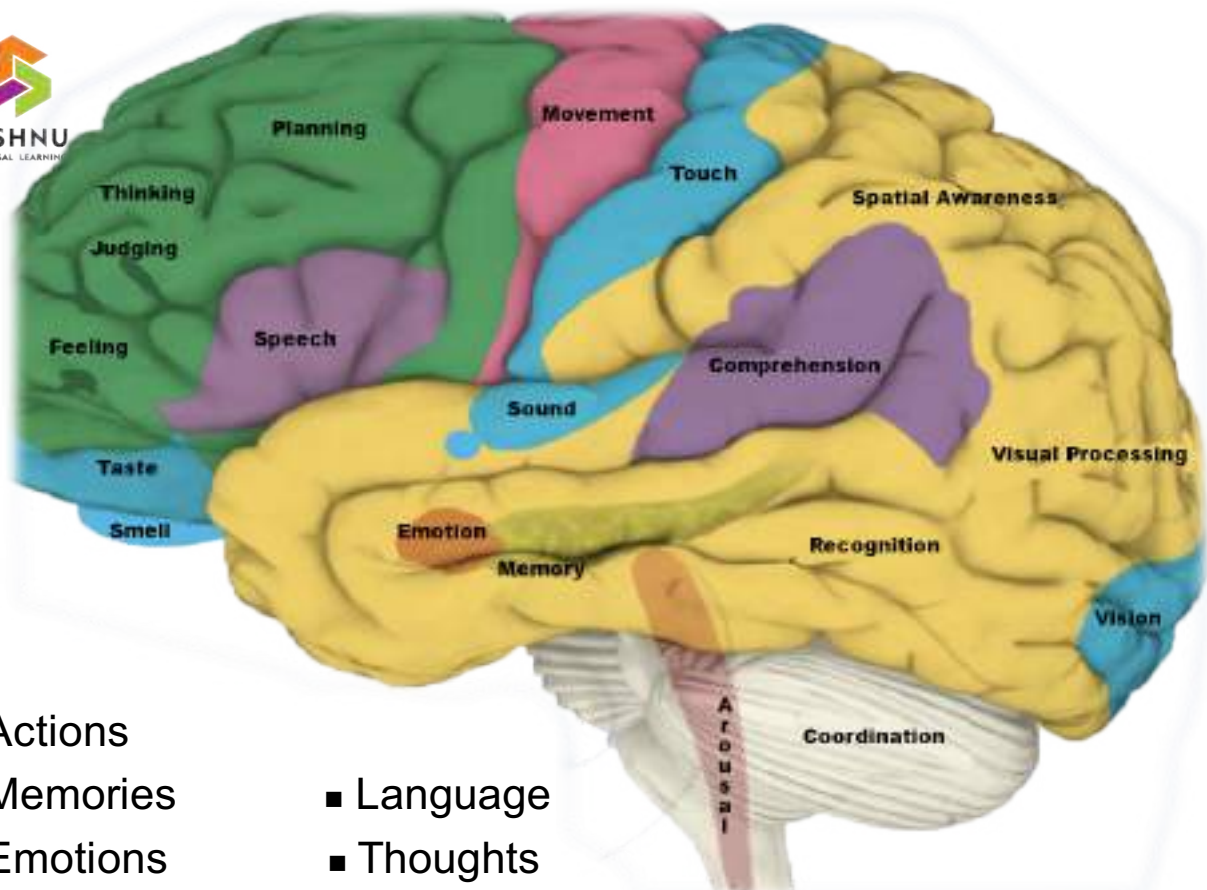
Which... ?

Who... ?

How... ?

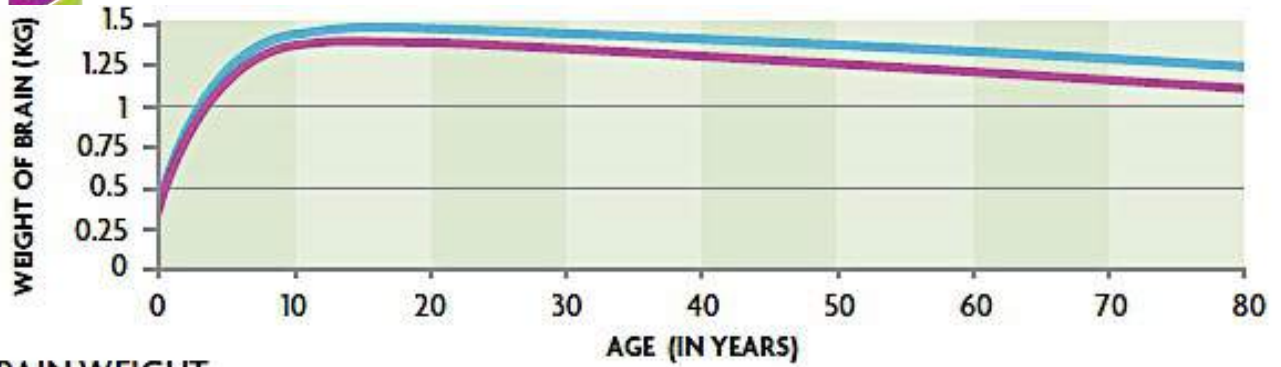
Part – 1

Brain and Learning & Coexistence, Cooperation, Collaboration

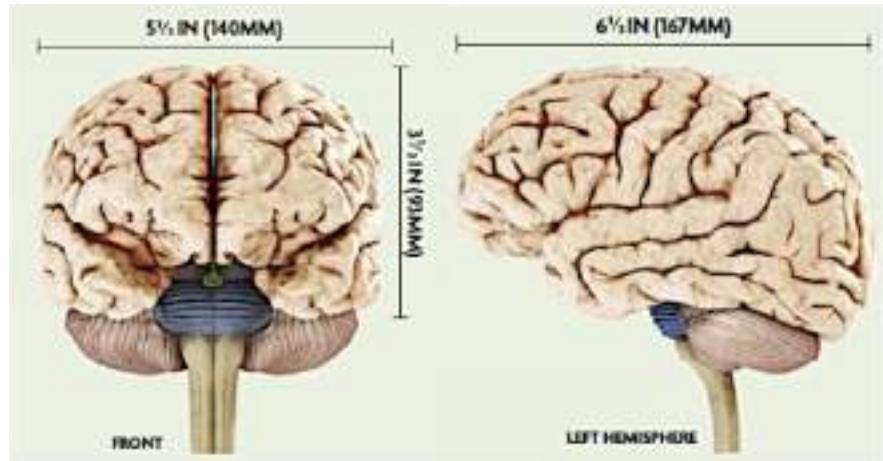


- Actions
- Memories
- Emotions
- Sensations
- Language
- Thoughts
- Perceptions

Brain Size



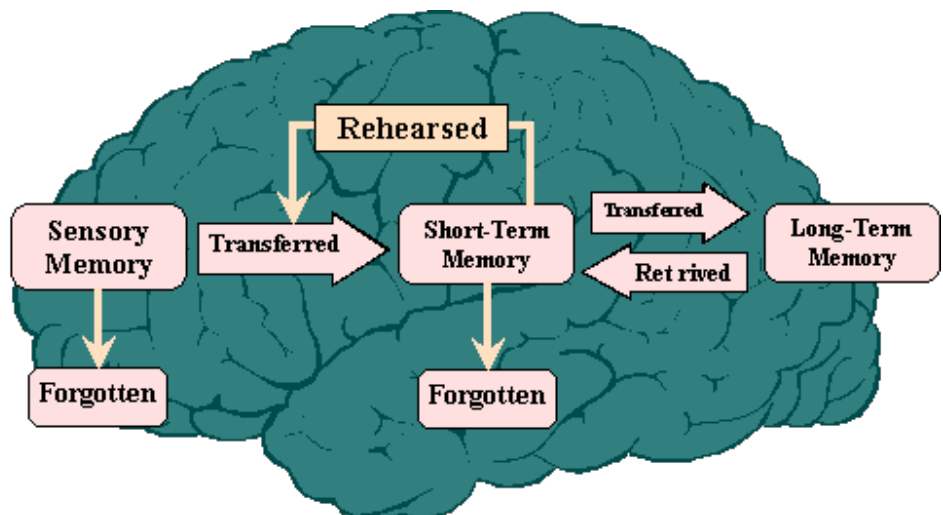
BRAIN WEIGHT



How the Brain Learns



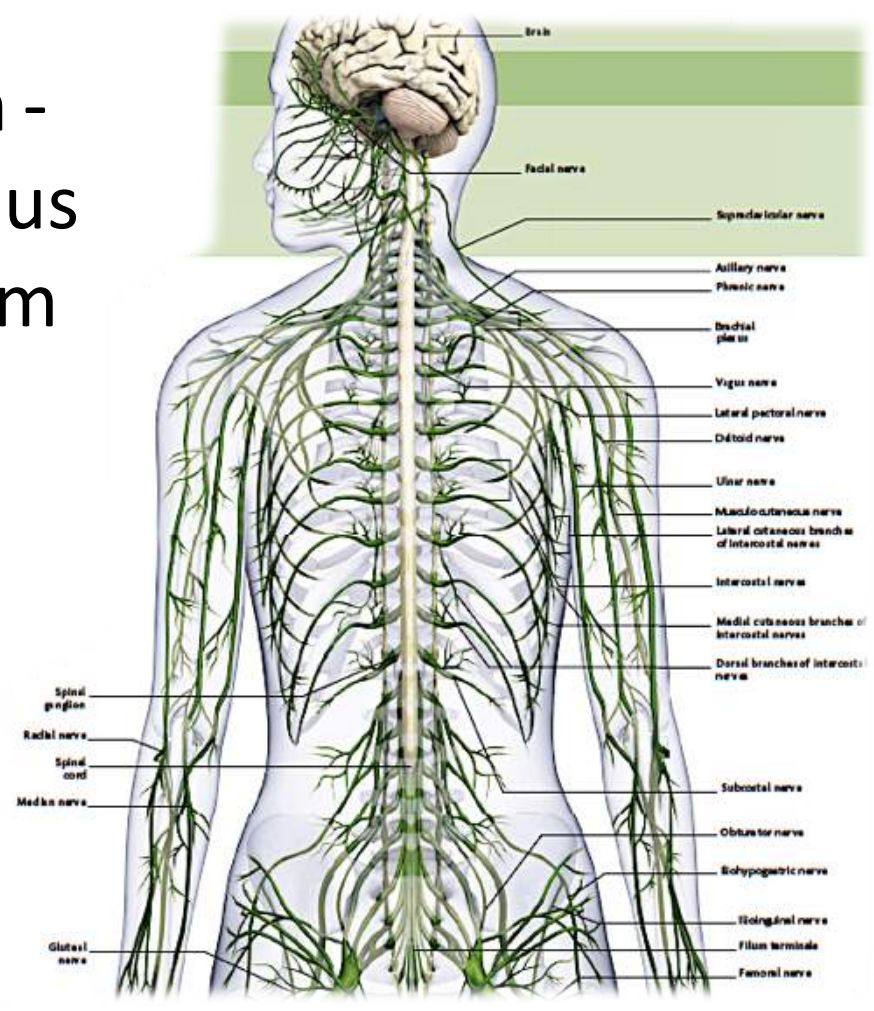
Information from Environment





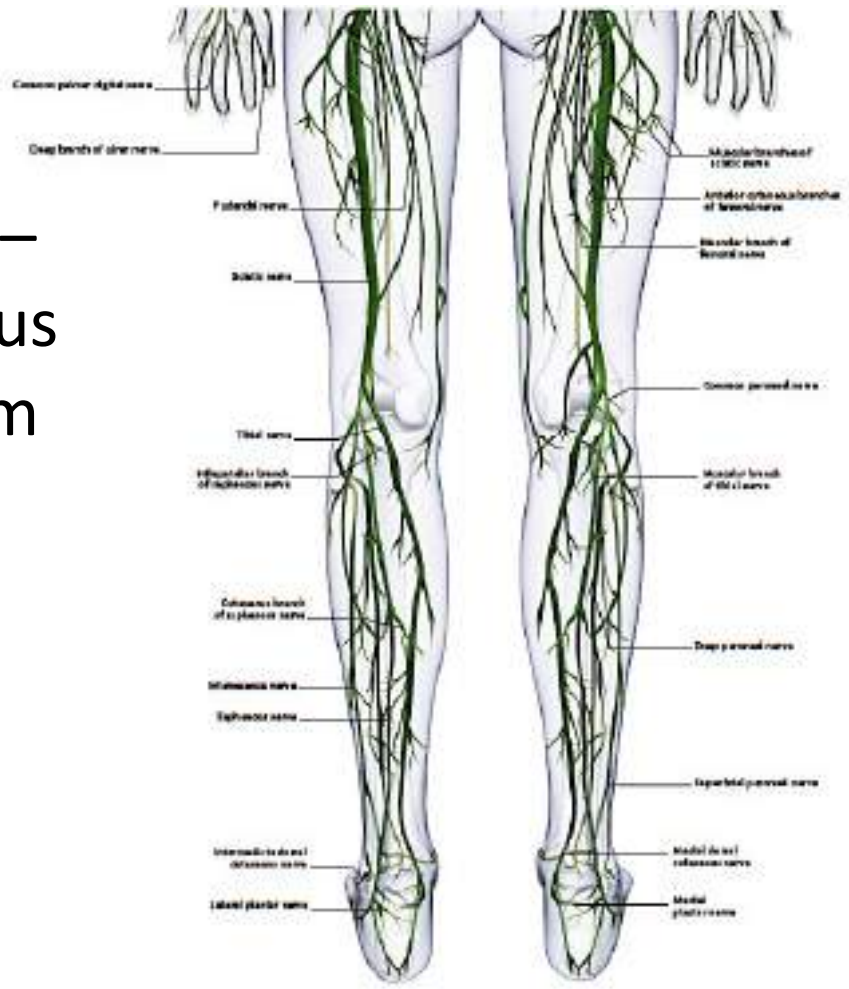
VISHNU
UNIVERSAL LEARNING

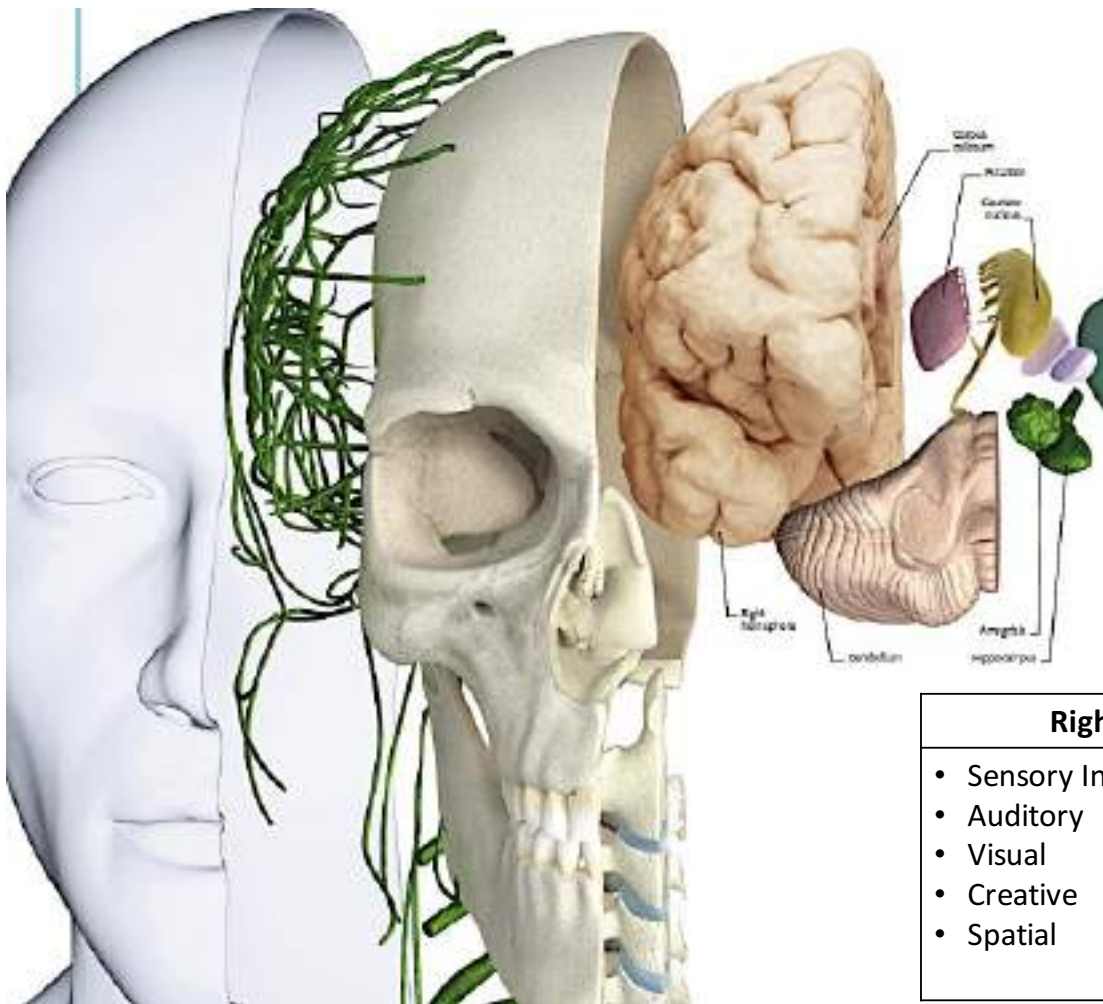
Brain - Nervous System



VISHNU
UNIVERSAL LEARNING

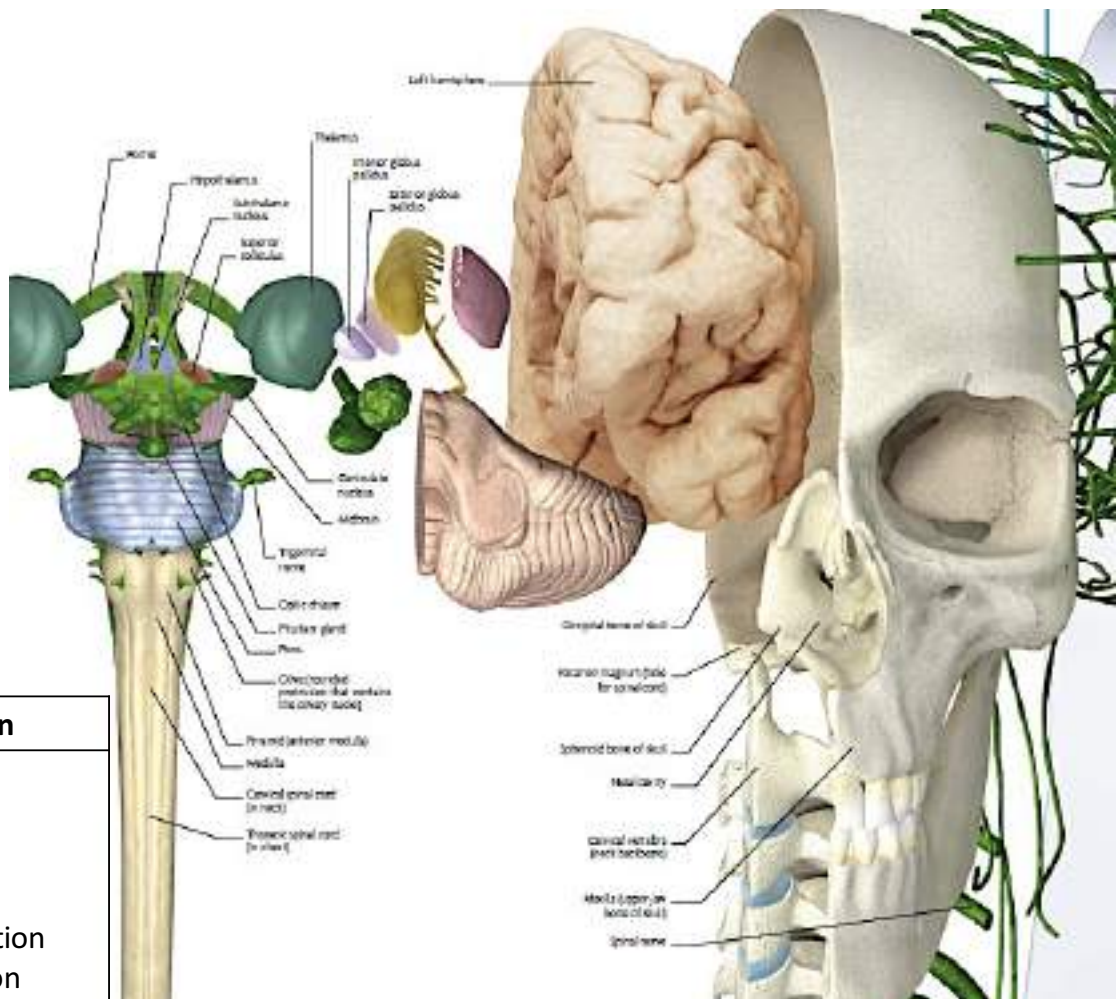
Brain – Nervous System





Right Brain

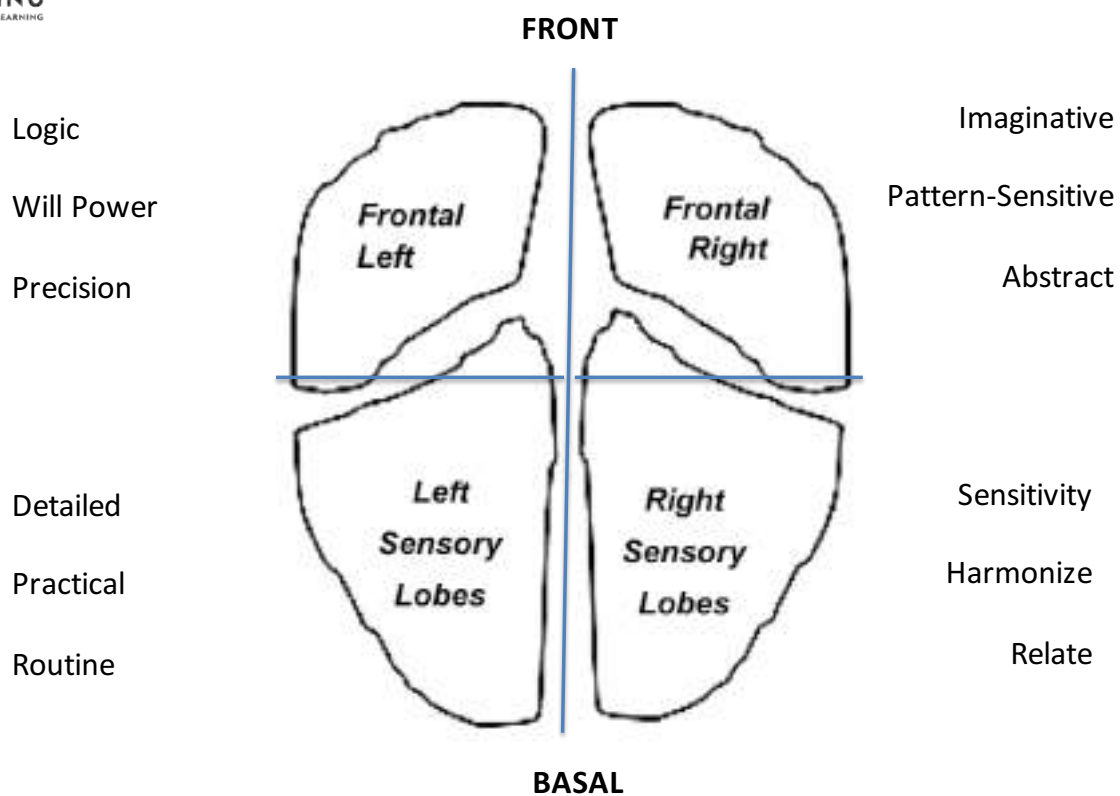
- Sensory Inputs
- Auditory
- Visual
- Creative
- Spatial



Left Brain

- Speech
- Language
- Reasoning
- Analysis
- Communication
- Muscle action

Four Quadrants of our Brain



Frontal Left

- Financial, Structural & Mathematical Analysis
- Weighing all the variables
- Logical Decision making
- Negotiations & Debate
- Prioritizing



Basal Left

- Monitoring
- Attention to Detail
- Routine Procedures
- Holding firm to Schedules
- Procedural & Administrative Support



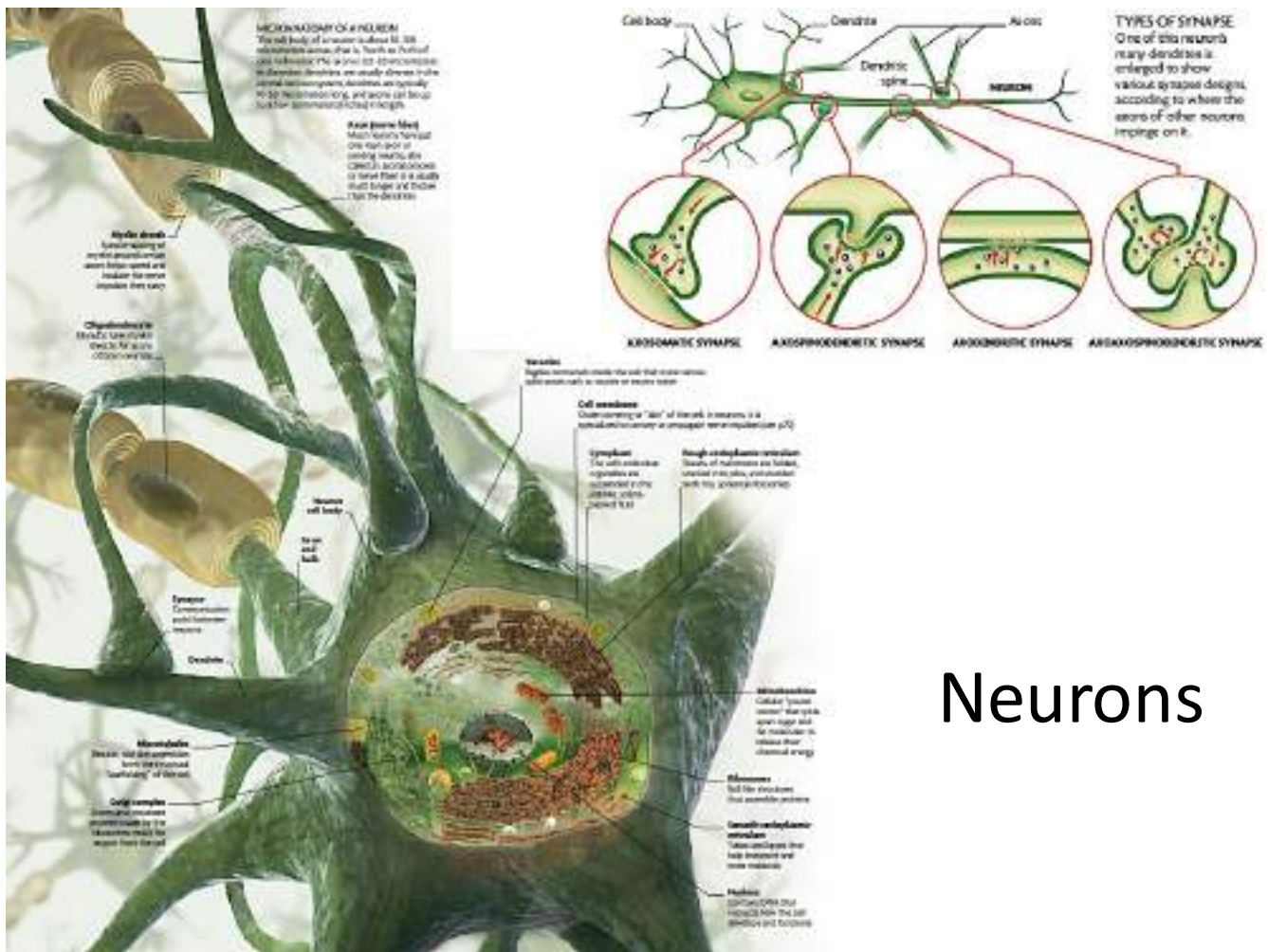
Basal Right

- Nurturing
- Celebrating
- Encouraging
- Soothing & Harmonizing
- Establishing a sense of bonding and belonging



Frontal Right

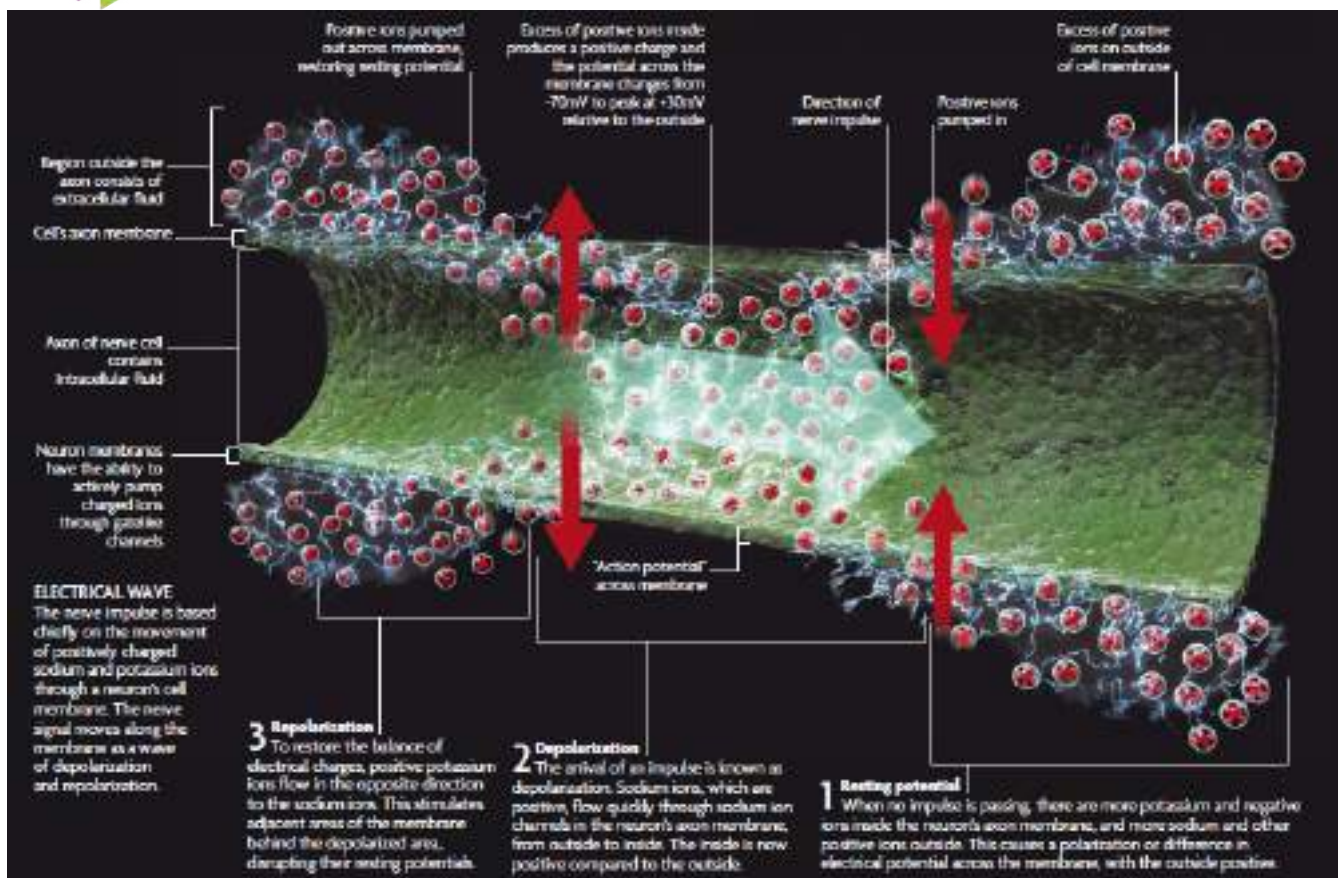
- Imagination and Creativity
- Troubleshooting
- Risk-taking
- Innovation
- Humour



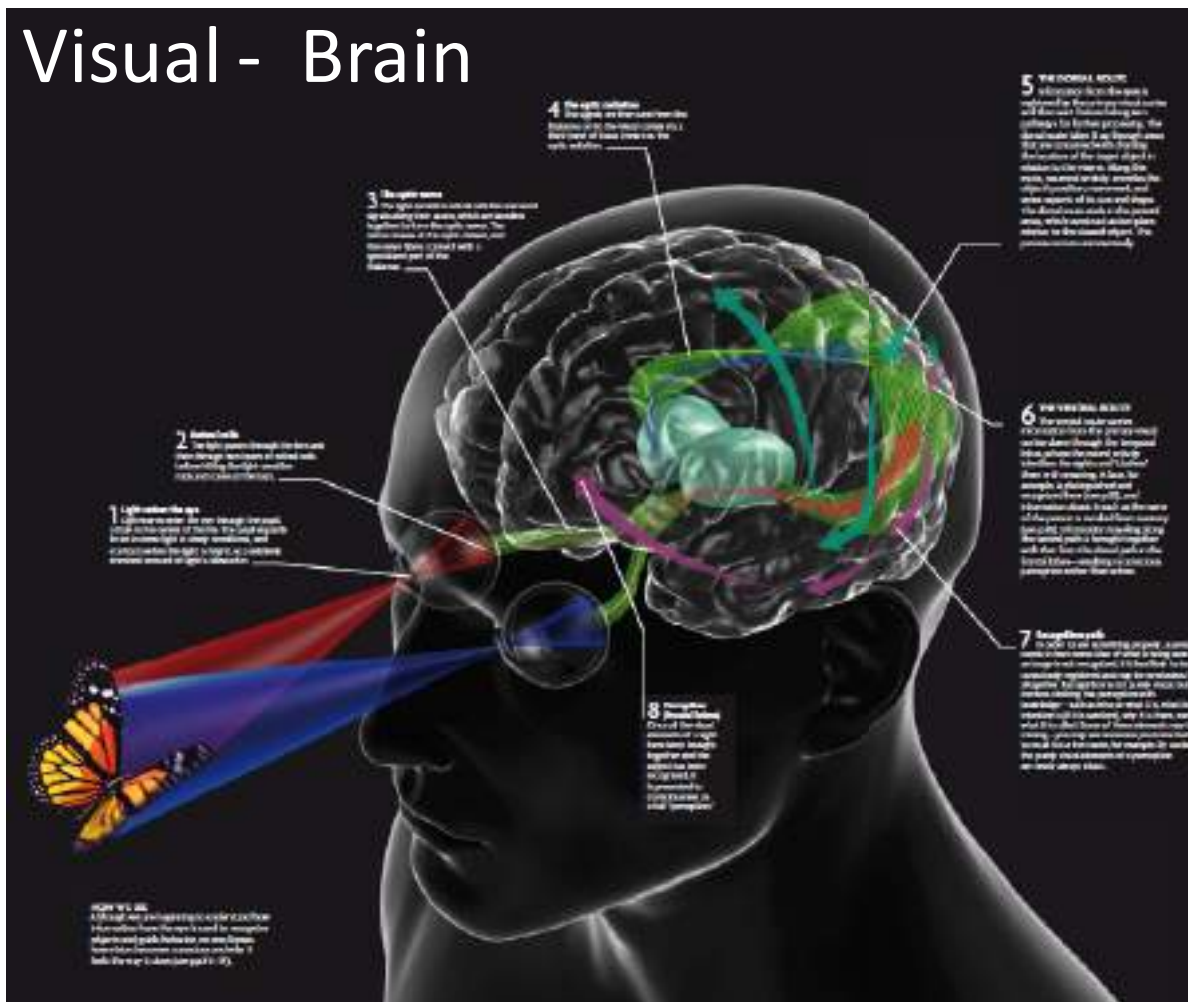
Neurons



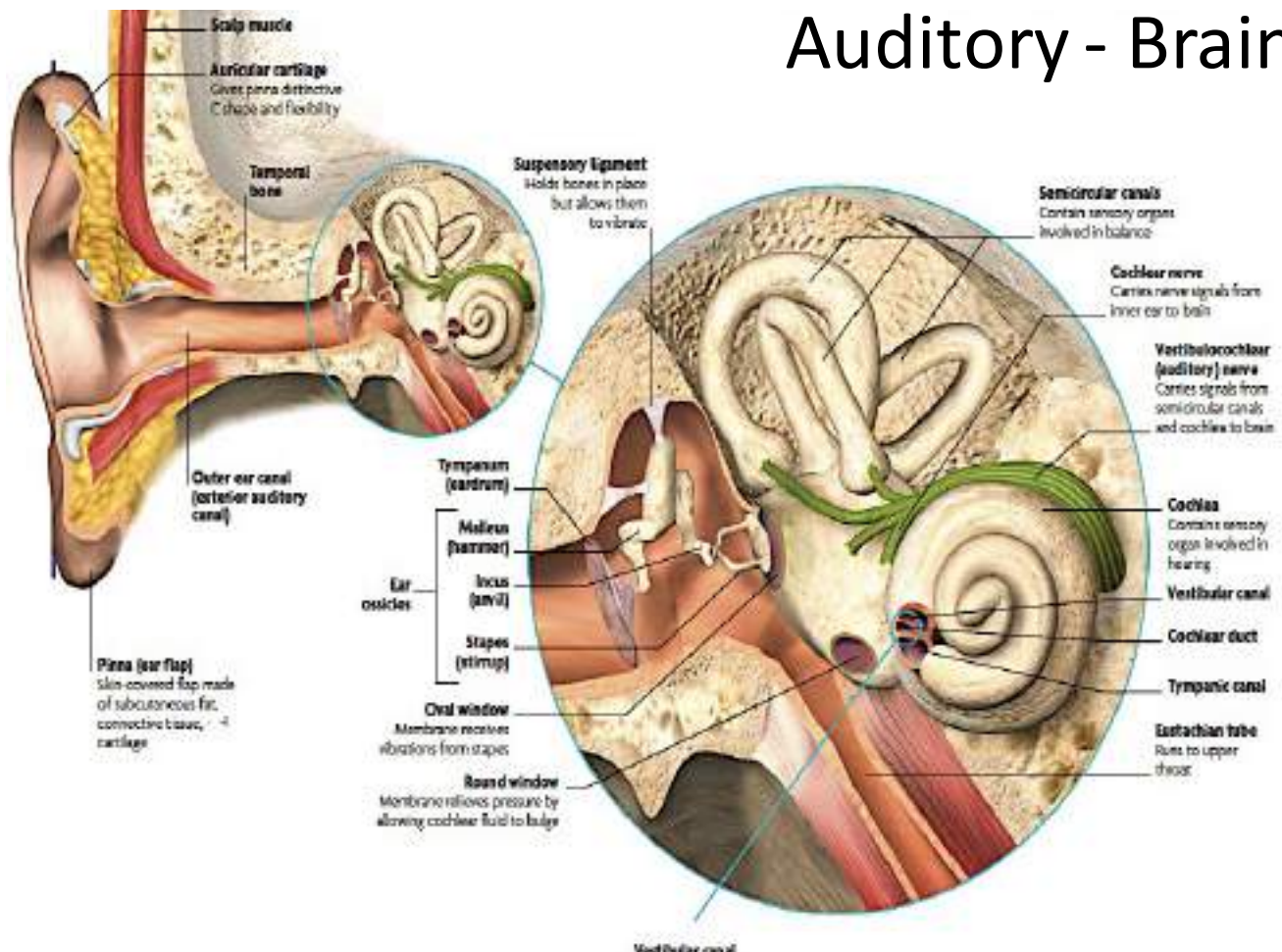
Electrical Impulse in a Brain

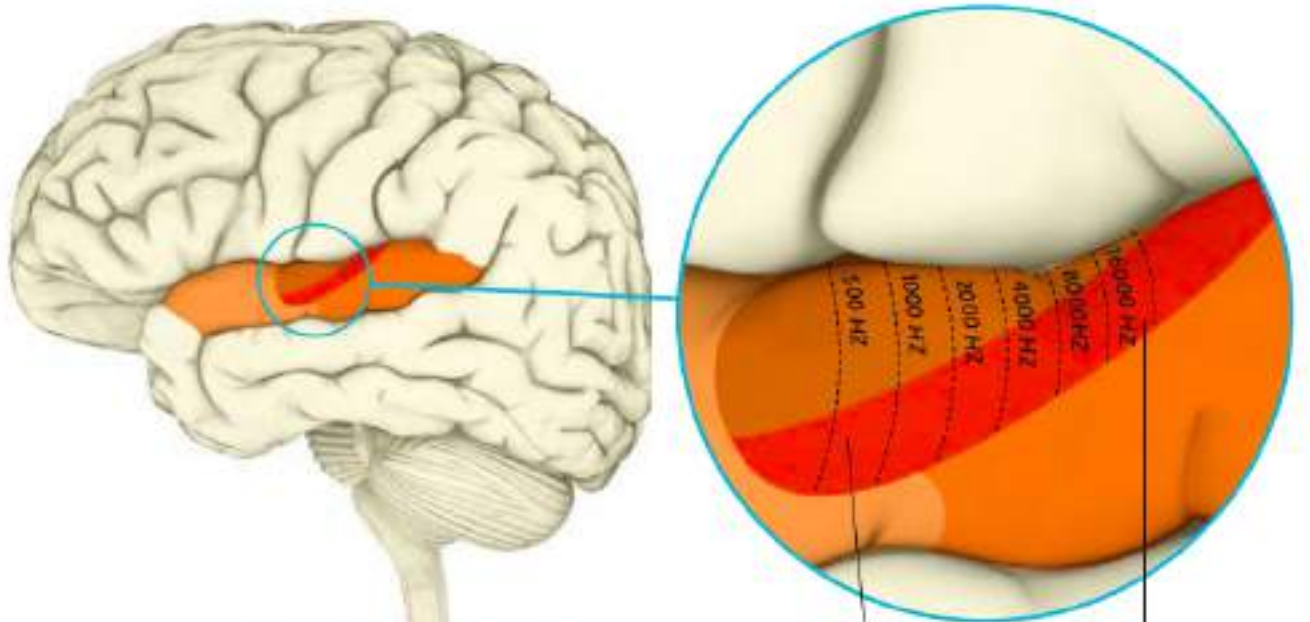


Visual - Brain



Auditory - Brain





PERCEIVING SOUND FREQUENCIES

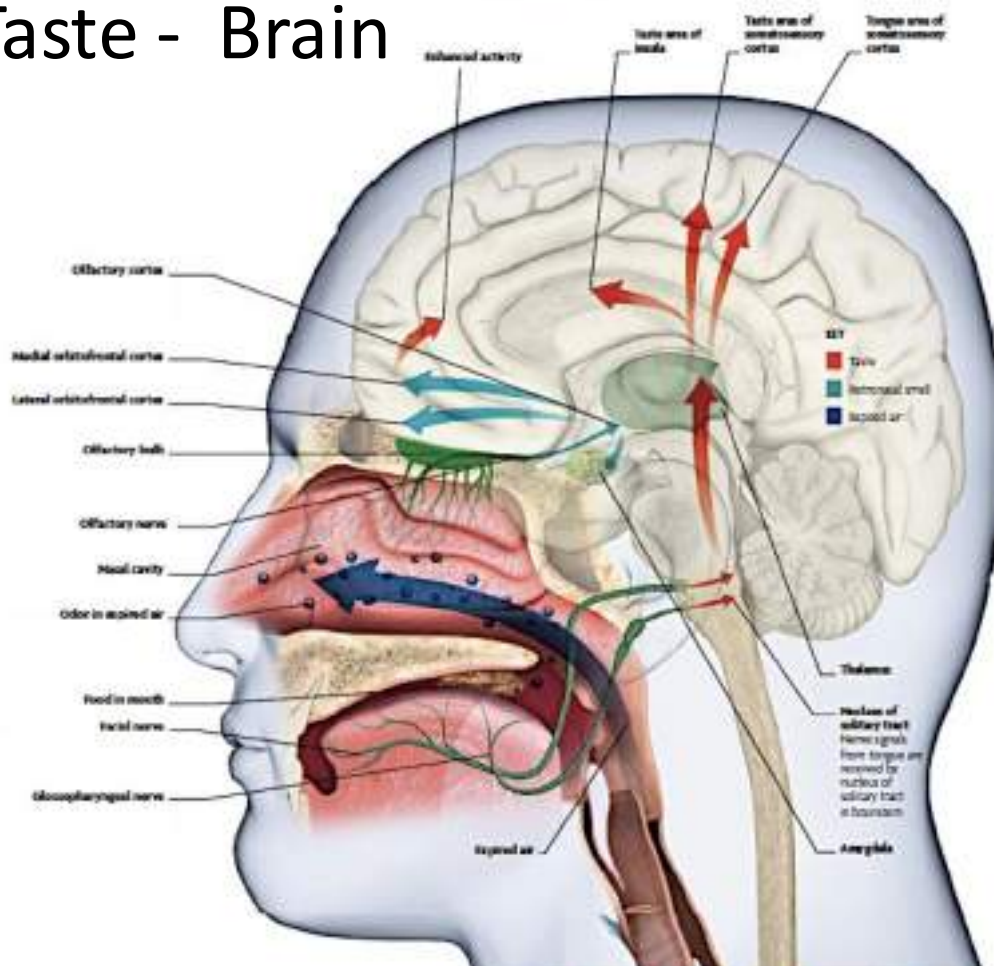
In the primary auditory cortex, neurons are sited according to the frequency each responds to, as are the sensory cells in the cochlea.

Corresponds to apex of cochlea

Corresponds to base of cochlea

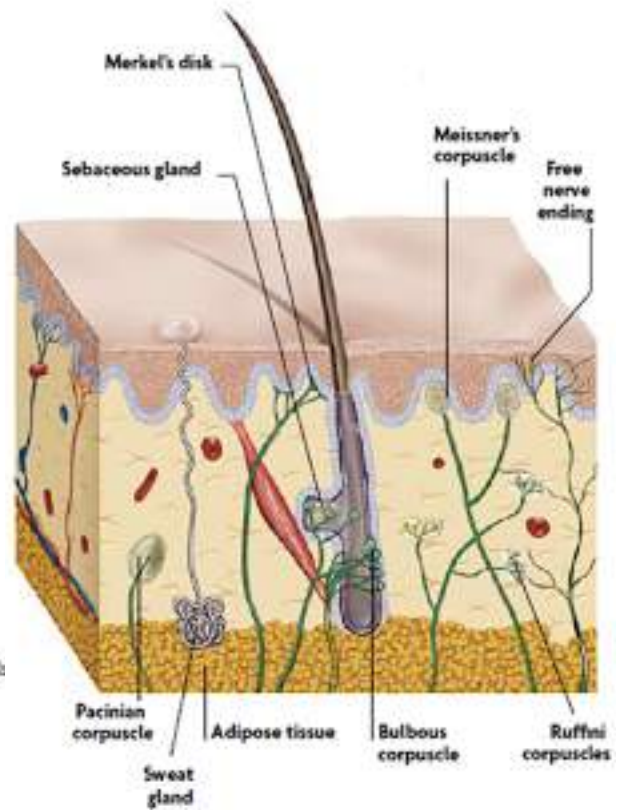
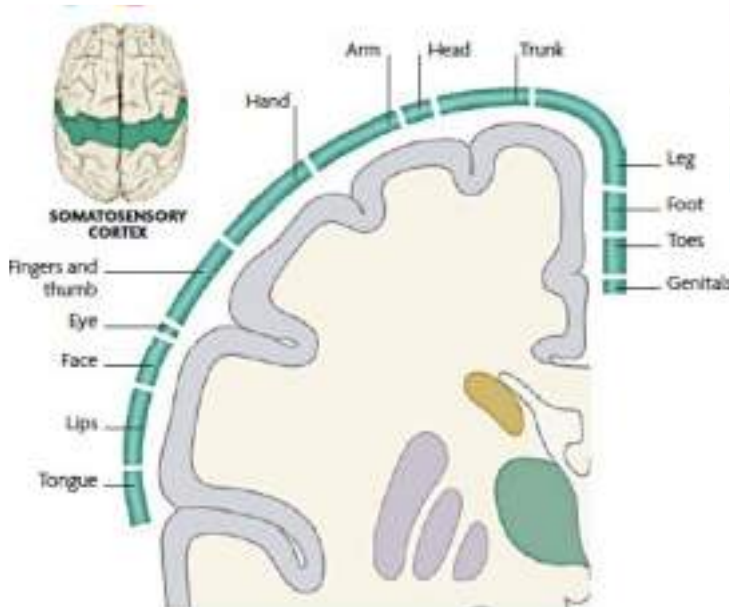
Smell & Taste - Brain

VISHNU
UNIVERSAL LEARNING



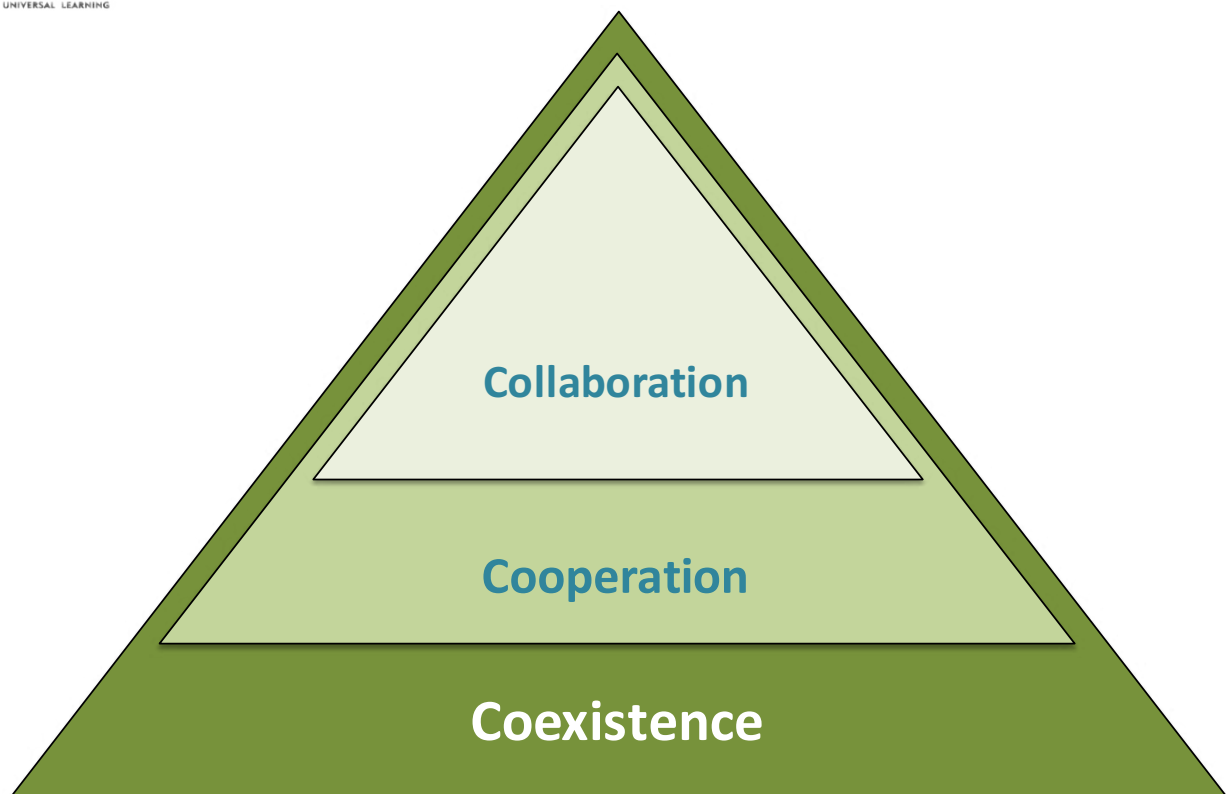
Touch - Brain

VISHNU
UNIVERSAL LEARNING



VISHNU
UNIVERSAL LEARNING

3 Cs of Life



Part – 2

Learning and its Components & Qualities of Teachers

“Teachers” - we cherish

- 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 ?



Qualities of a “Good” Teacher

- 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 rounders
- Command
- Knowledge



As a Teacher

How many students will we impact ?

- No. of courses 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 ?

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*

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

1. Think & Read is PARTIAL Learning

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

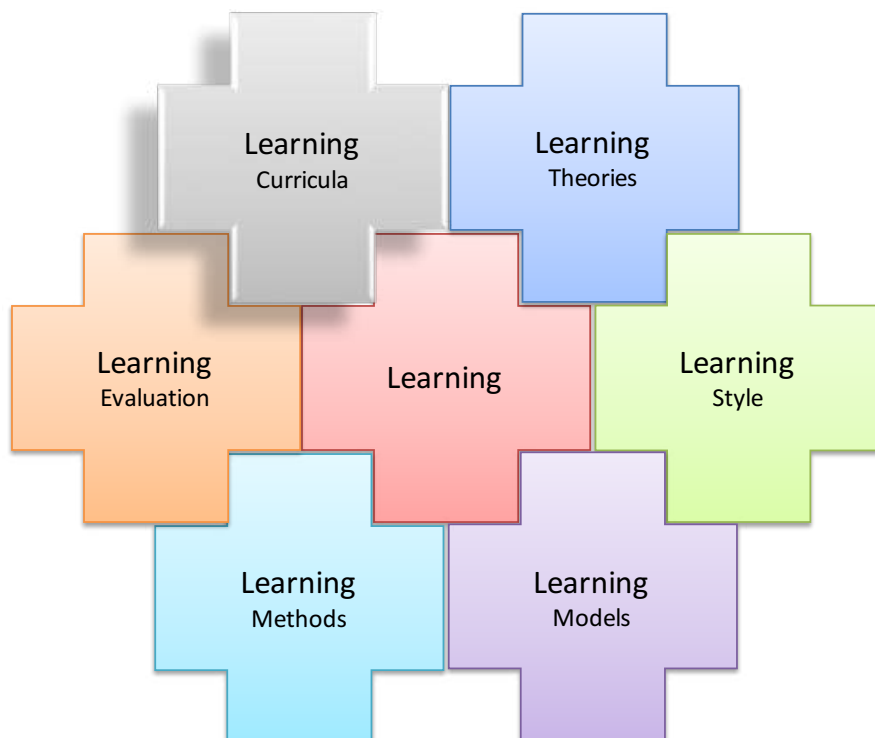
5. Think & Read }
Think & Write }
Think & Discuss } is _____ % Learning

Rules for Learning

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

“Anything COPIED is NOT learnt at all”

Learning and its Components



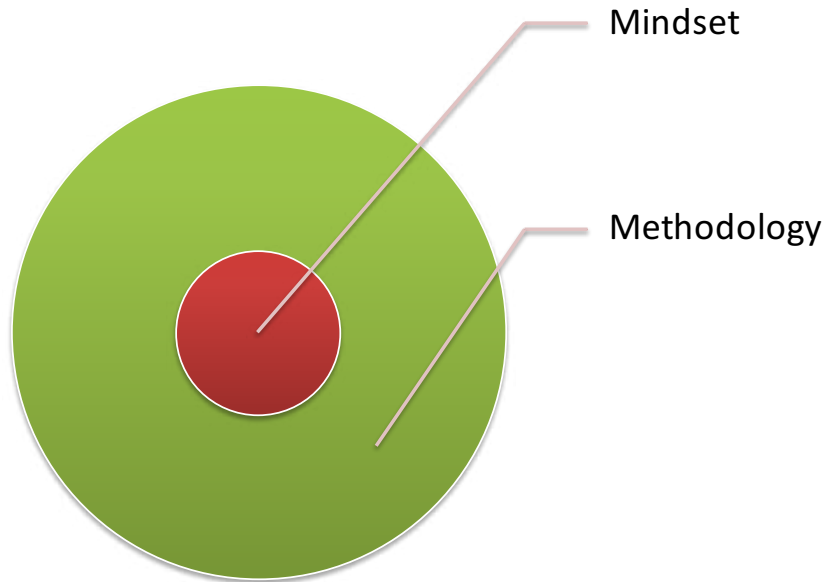
Part – 3

Memory & Intelligence & Knowledge Construction

The content and context



Context : Mindset & Methodology



Harvard Research on Retention

- 100% The Speaker wanted to 'say'
- 80% was said
- 60% was heard
- 40% was remembered after 3 hrs
- 15% was remembered after 3 days
- 0-5% was remembered after 3 months



Key features of the Brain (Match the Following)

VICENIU

Feature	Description
1. Processing Information	A. Brain consists 100 billion cells. 10% of specialized cells are called neurons that send signal to one another. Signals are electrical, but mode is chemical, and sent through neurotransmitters
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. Plasticity	E. Blueprint of our brain is dictated by genes. Each brain is unique and hence people are unique.



Brain Performs..... Match the features

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.,



VISHNU
UNIVERSAL LEARNING

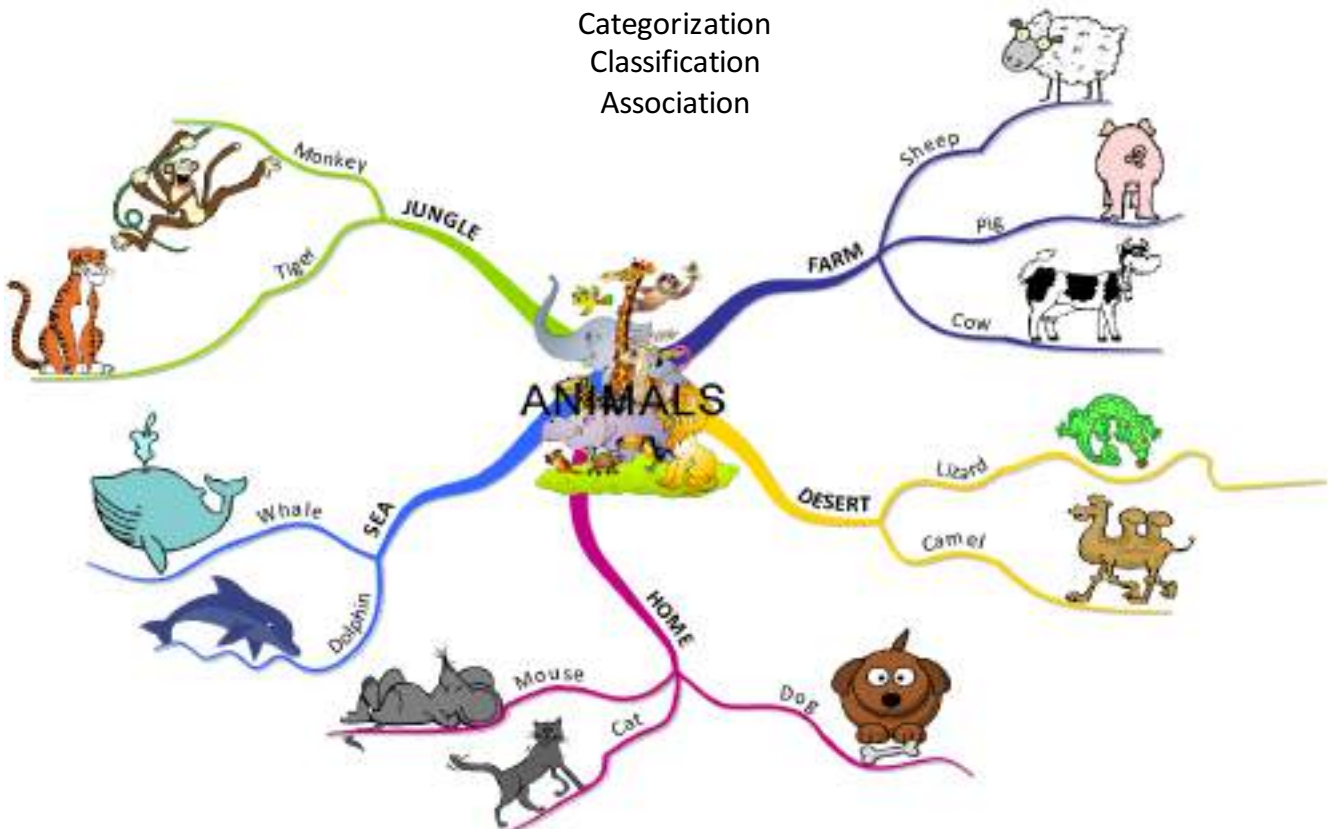
Mind Map for Effective Learning

Brain Learns through....

Categorization

Classification

Association



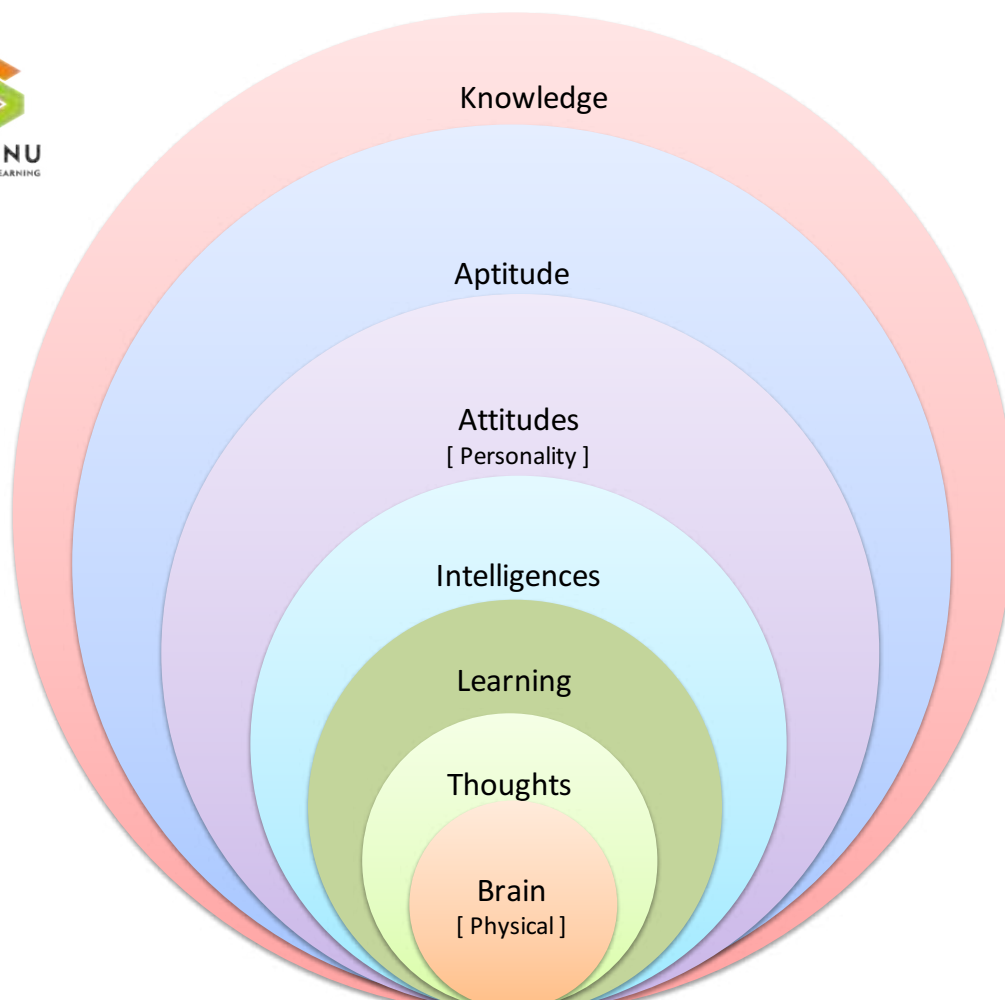
VISHNU
UNIVERSAL LEARNING

Let us calculate the *learning workload* of a Learner

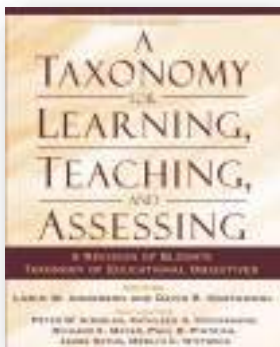
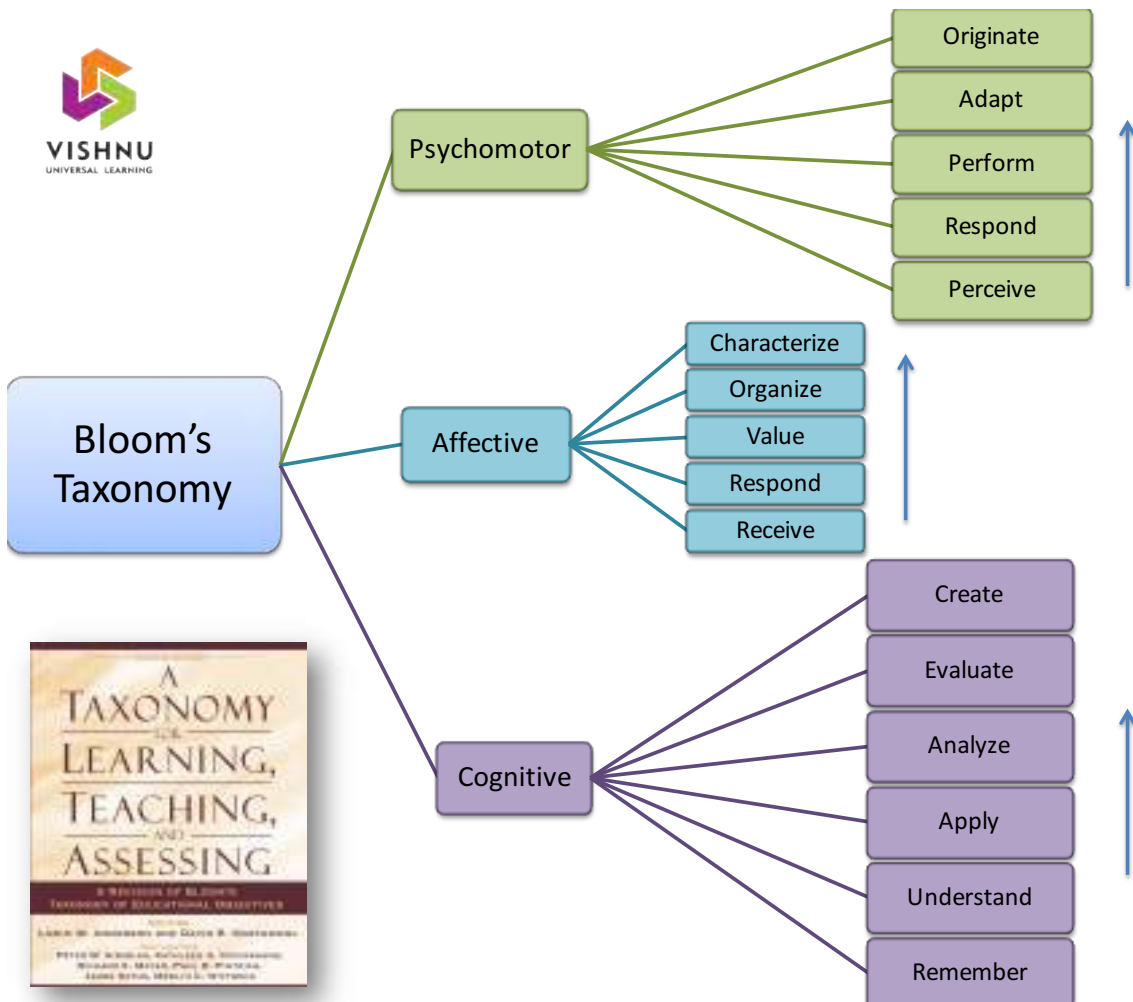
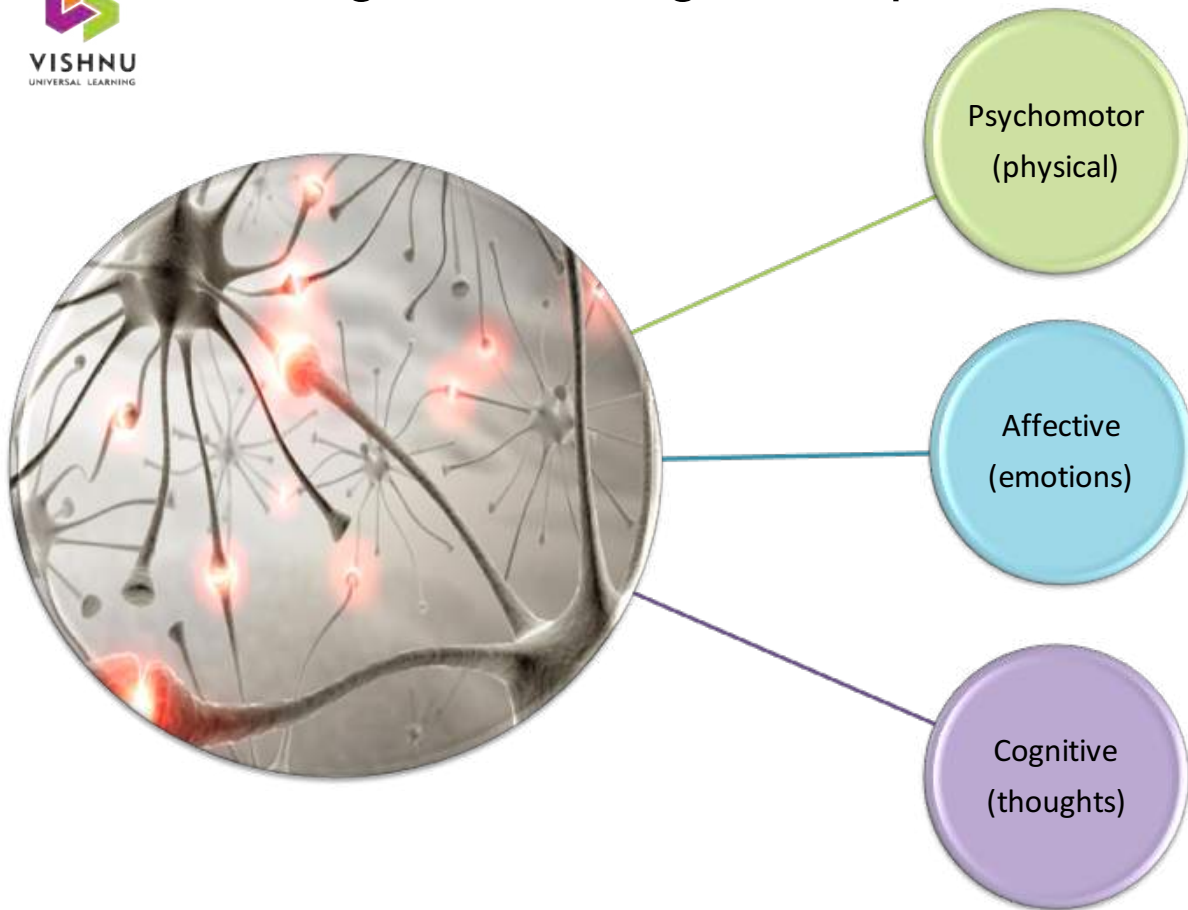
- | | | |
|----|--|---|
| A. | No. of Class periods in a Day (include theory and practical hours) | : |
| B. | Average number of Concepts taught in each of these period | : |
| C. | So Number of Concepts learned by students in a day ($C = A \times B$) | : |
| D. | Avg. Time required to learn ONE concept 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 ($I = H \times D$) | : |

Part – 4

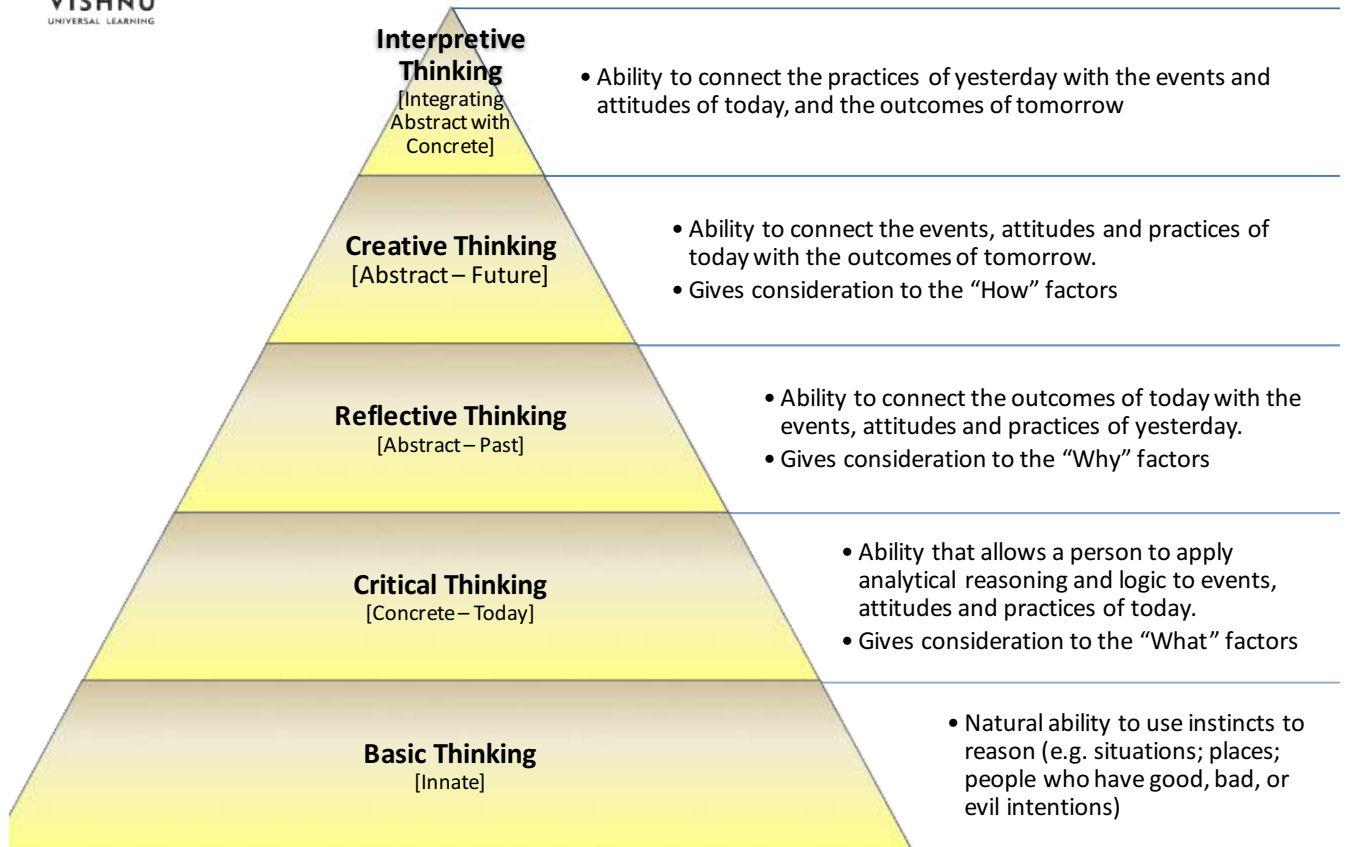
Thoughts, Learning, Intelligence, Personality



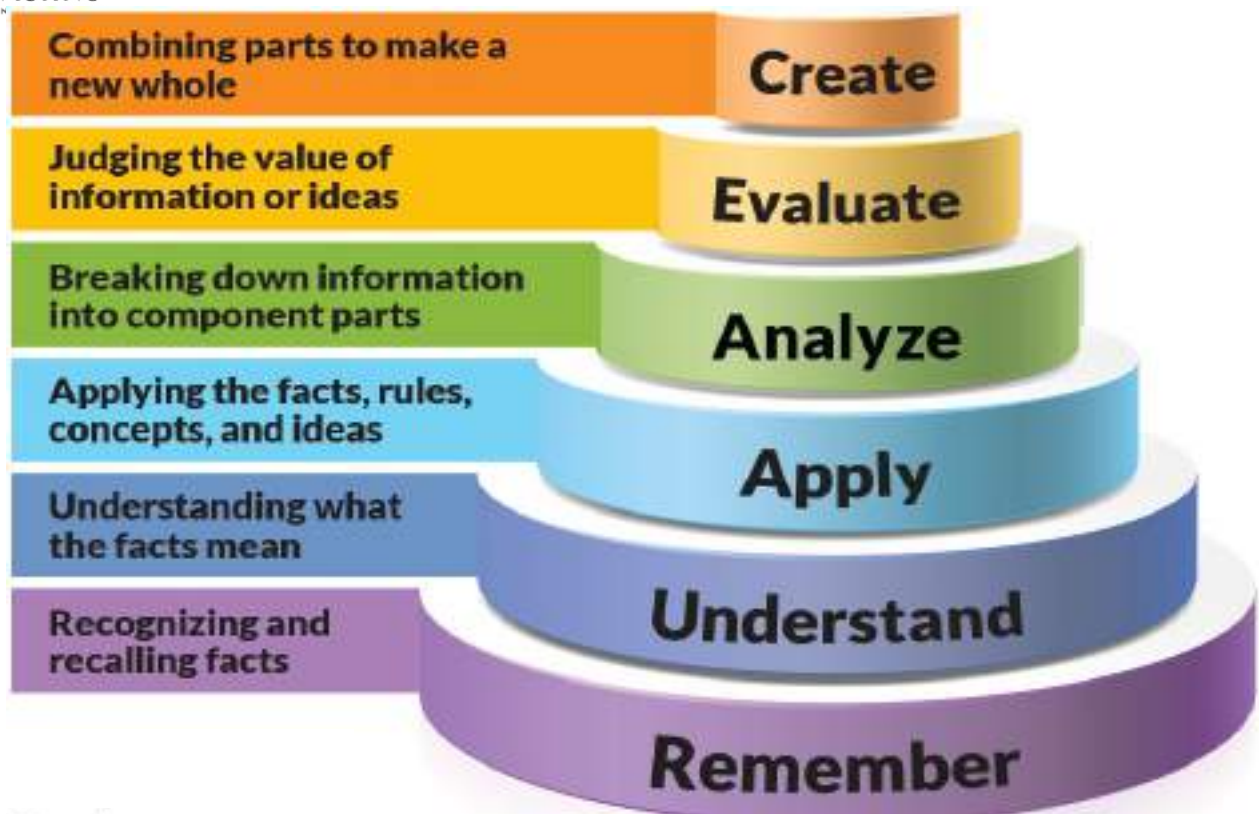
Brain generates signals to perform...



Glenn's Holistic Thinking Pyramid



Bloom's Cognitive Taxonomy



Eight Styles of Intelligences



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*)

Part – 5

Pedagogy and its Components & Theories in Learning



What is our Institution's Vision ?

(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 ?

(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**



What is our Institution's Mission ?

BVRIT (Womens)

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



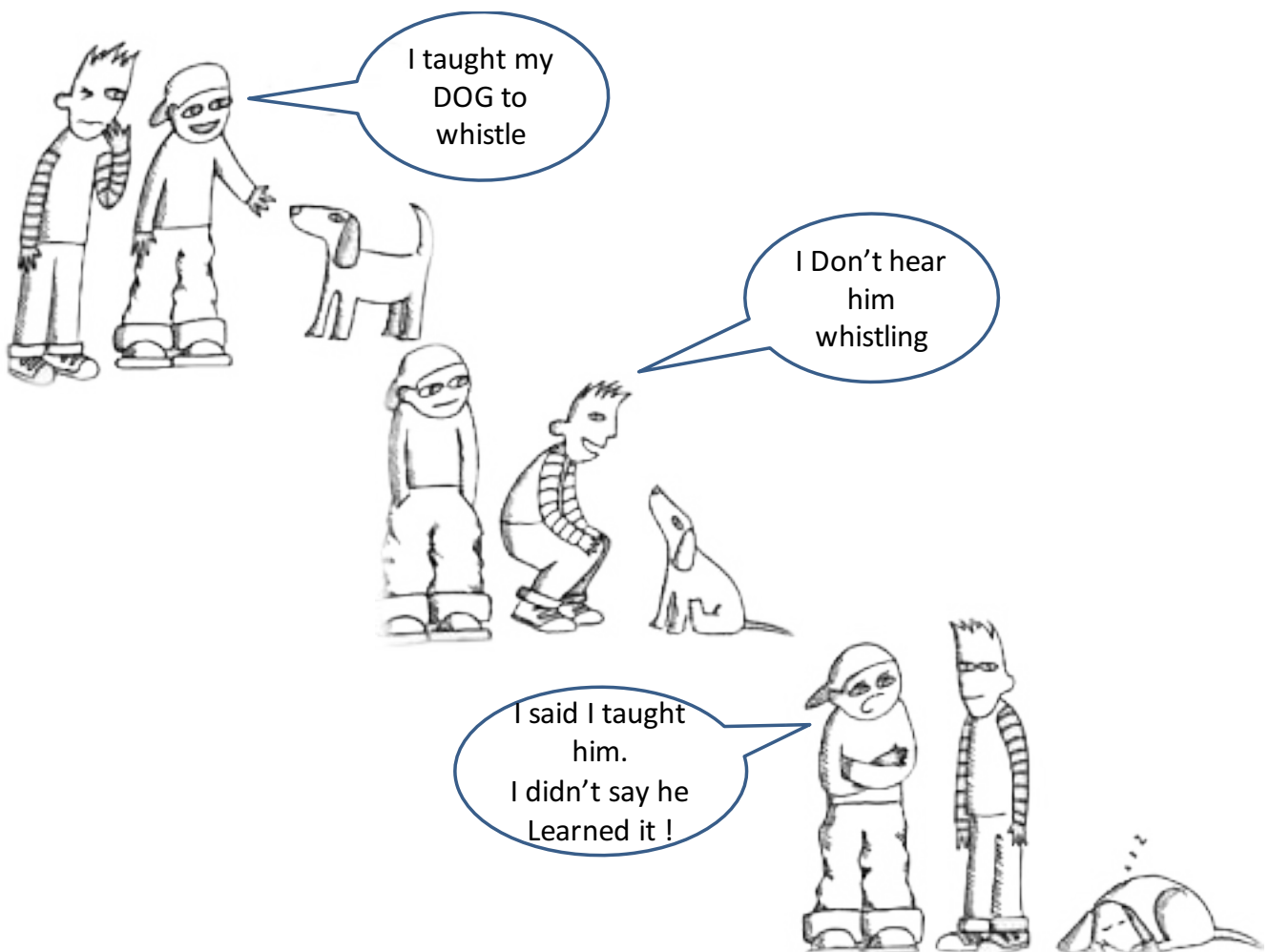
“Science” of Education

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

“Science” of Education

- **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





Pedagogy Vs Andragogy

	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



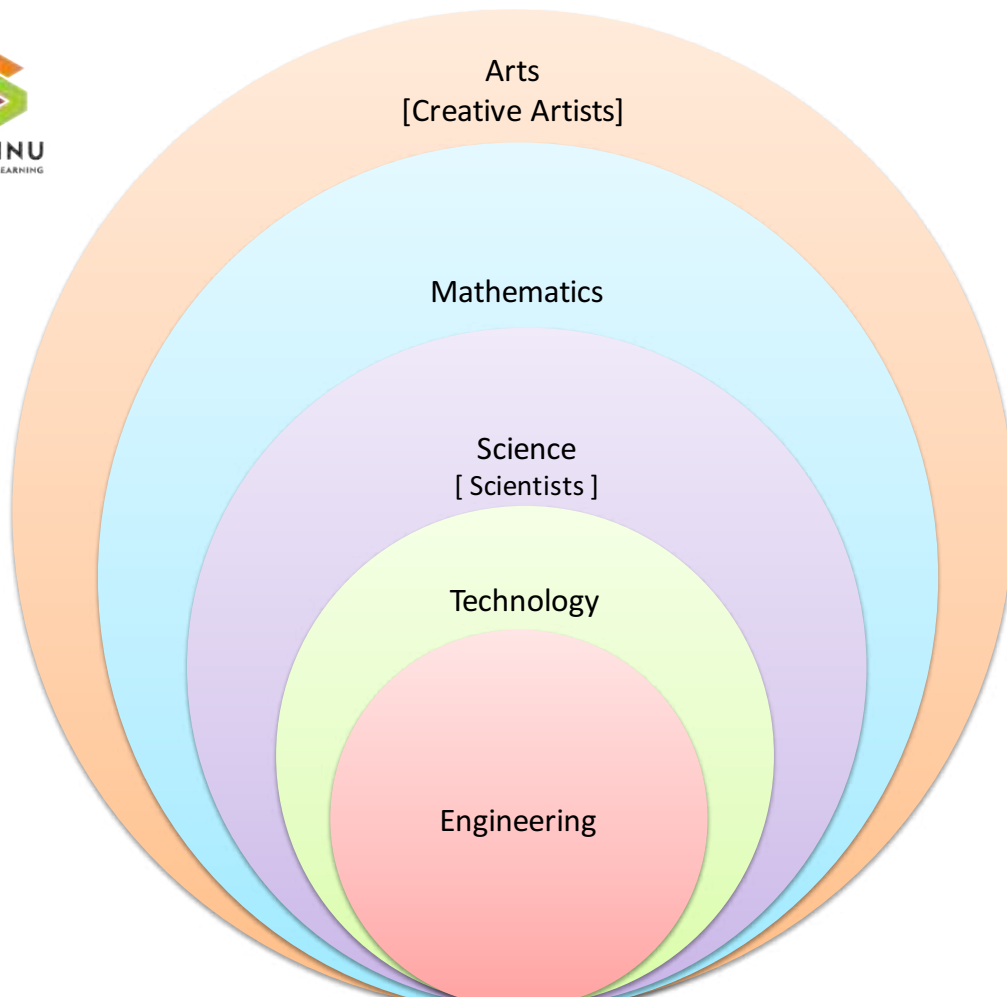
Pedagogy Vs Andragogy

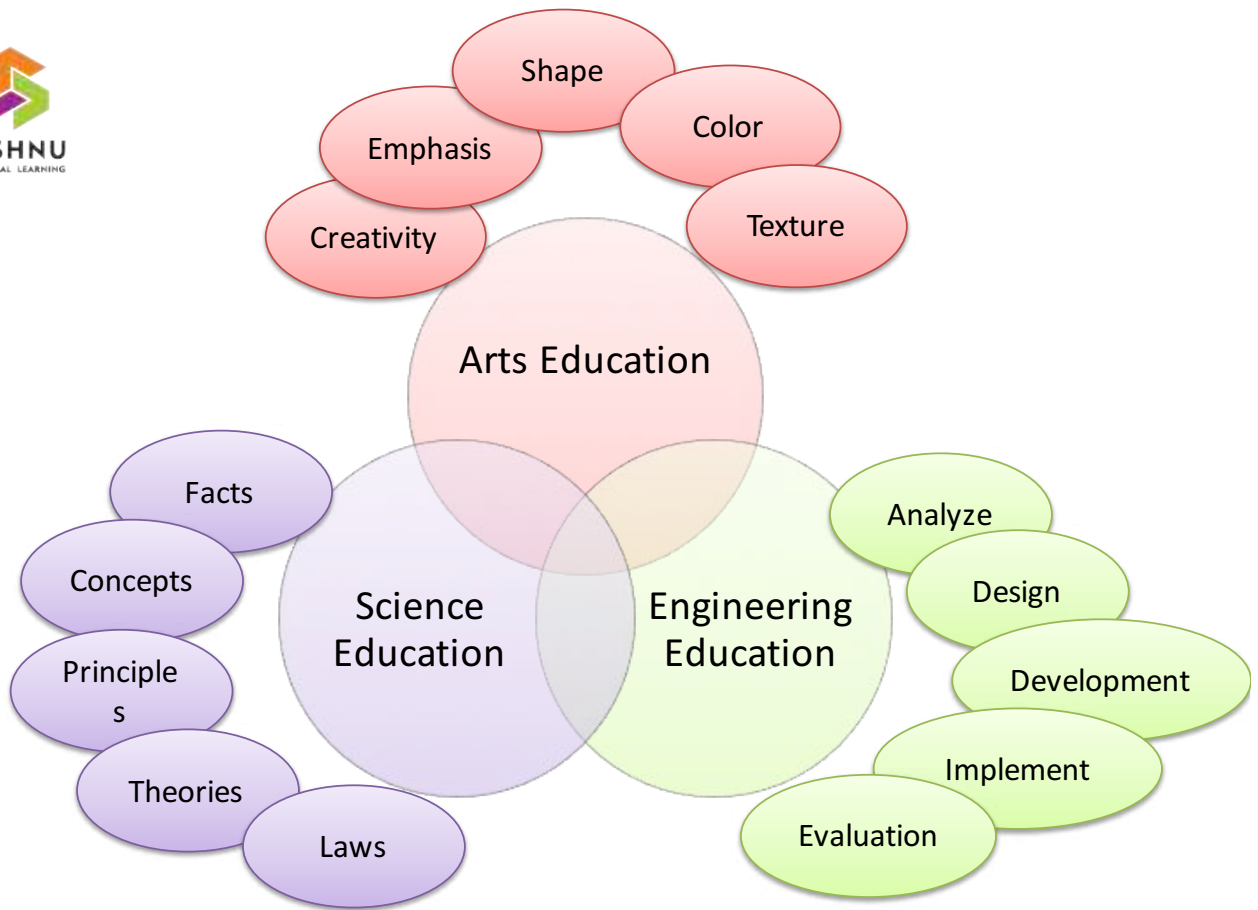
	Pedagogical	Andragogical
Readiness to Learn	<ul style="list-style-type: none"> Students are told what they have to learn in order to advance to the next level of Mastery 	<ul style="list-style-type: none"> Any change is likely to trigger a readiness to learn The need to know in order to perform more 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



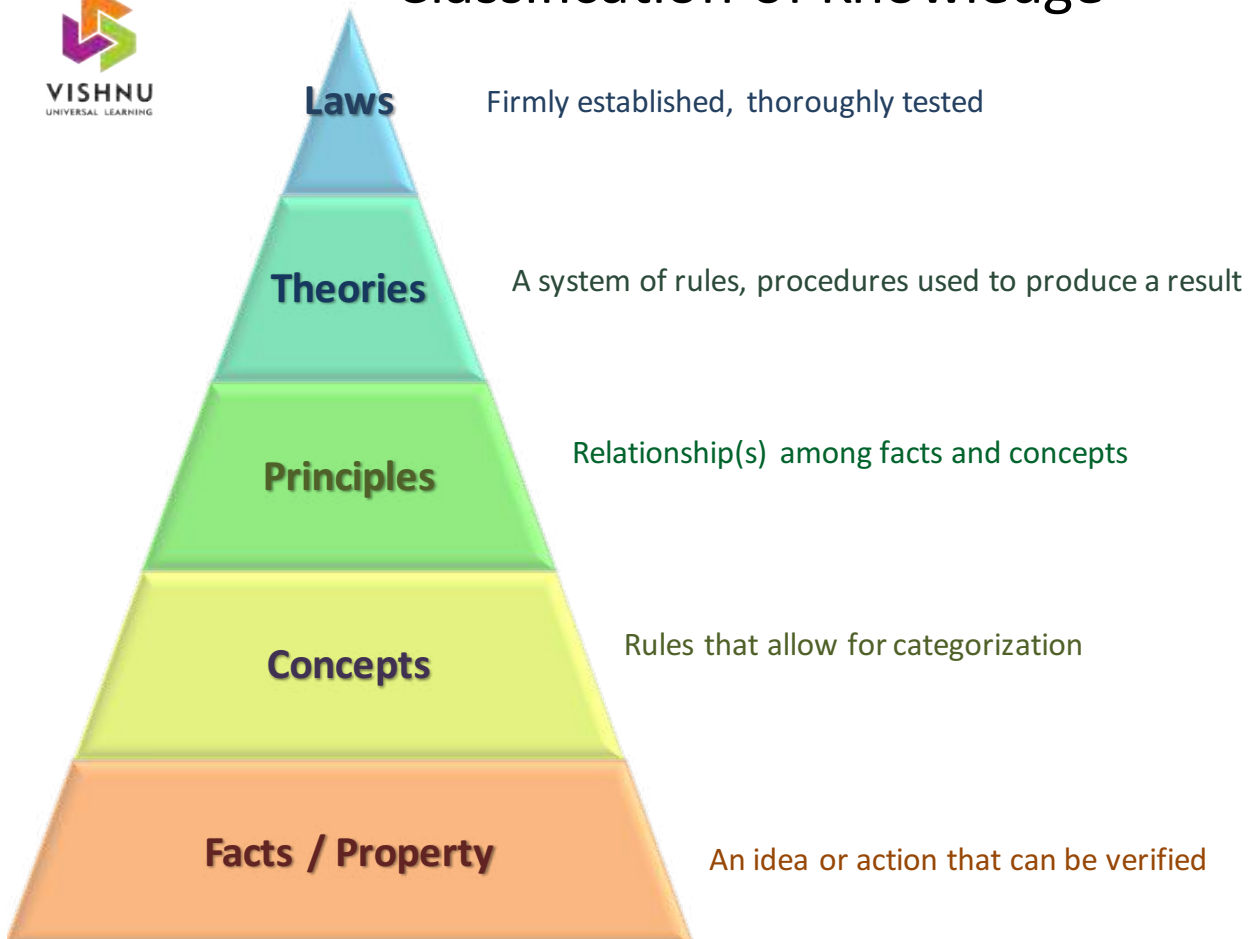
Pedagogy Vs Andragogy

	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, andconsequences of failure	<ul style="list-style-type: none">Internal motivators:<ul style="list-style-type: none">self-esteemrecognitionbetter quality of lifeself-confidenceself-actualization

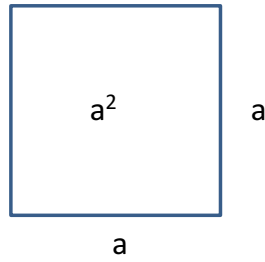




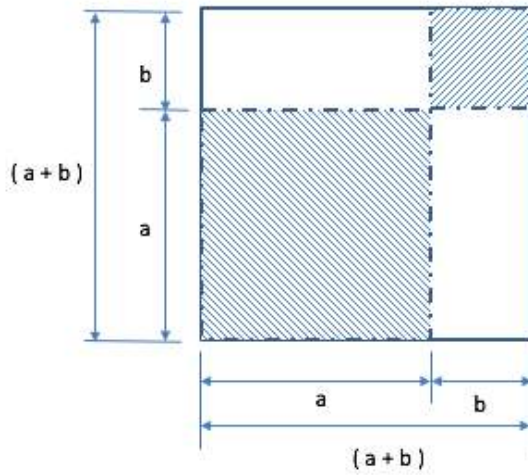
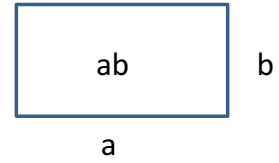
Classification of Knowledge



Shape ??
Area ??

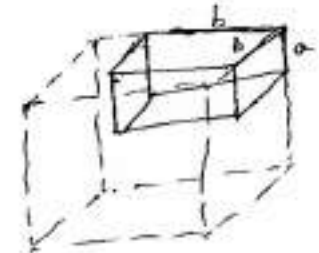
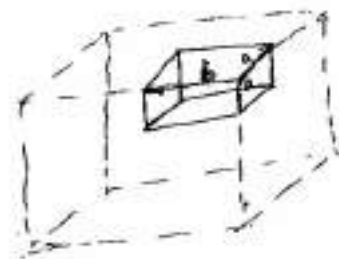
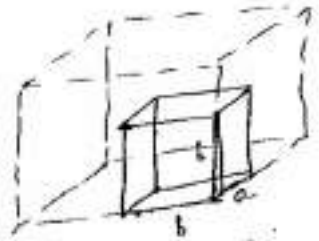
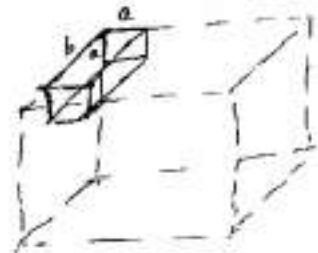
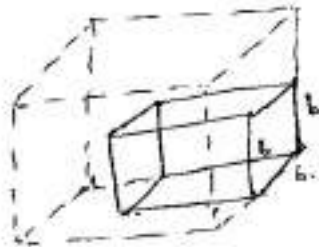
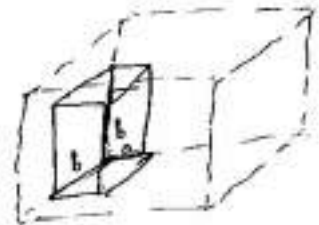
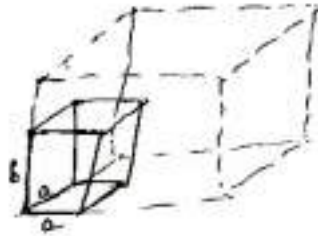
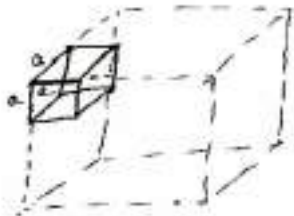


Shape ??
Area ??



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

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



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

$$(3a^2b)$$

$$(3ab^2)$$

Part – 6

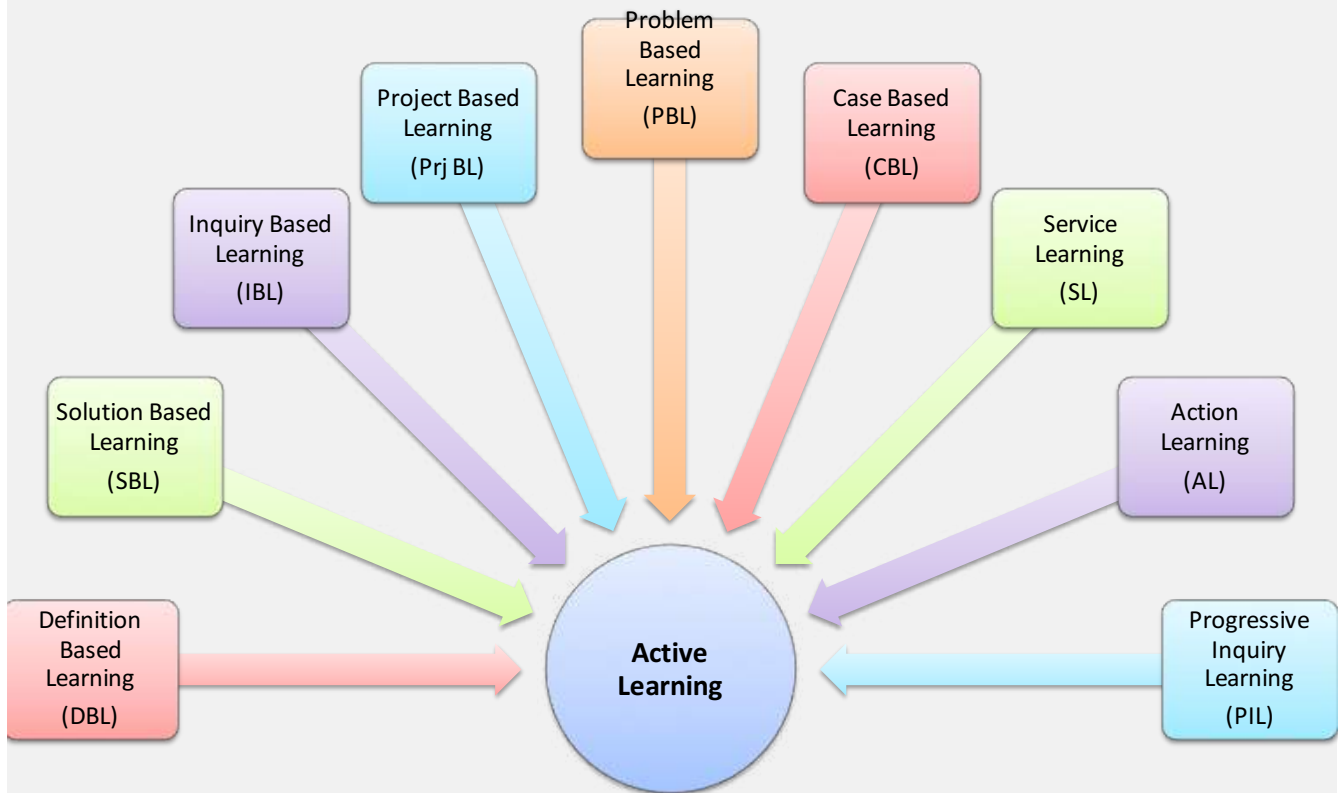
Active Learning & Learning Outcomes

Writing Learning Outcomes

At the end of this session on, my learners will be able to:

- Define....
- List.....
- Solve....

etc.,

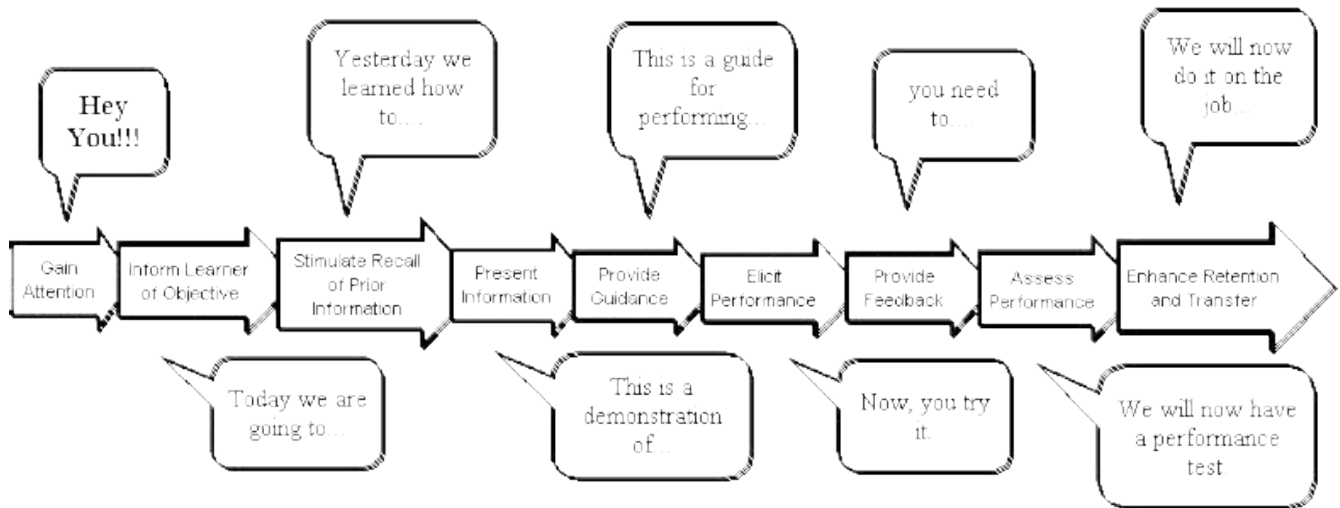


Active Learning..... Match the description



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

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

How to Structure a Session 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

Part – 7

Curricula Analyzing and Planning & Creating Learning Evaluation

Evaluation

- 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




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



My Department

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



5 – Year Plan for your Department

<ul style="list-style-type: none"> • Hire Ph.Ds for Senior Faculty • Start a Technical Society • Conduct Conference • Start Intl. Journal • State of the art Labs • Industry inside Dept. • Dept. Website Updation • Visiting Faculty • MoU with Leading Industries 	<ul style="list-style-type: none"> • Green Initiatives • 	<ul style="list-style-type: none"> • Higher Education • • 	<ul style="list-style-type: none"> • Research 	
Year - 1	Year - 2	Year - 3	Year - 4	Year - 5



Faculty Road Map – Fresh M.E

<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



Faculty Road Map – Ph.D

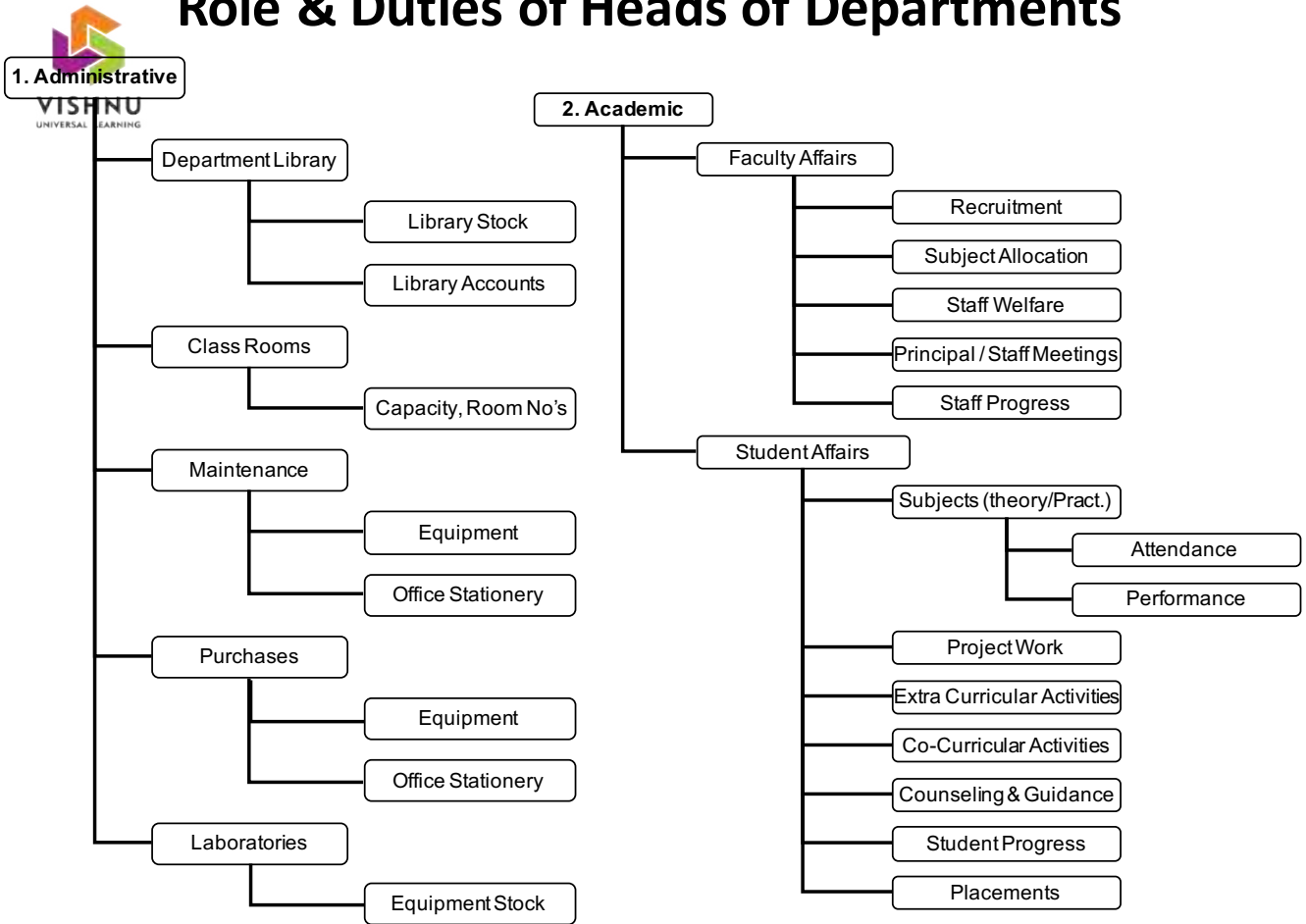
<p>Administrative Professor Modern Office Facility</p> <p>Academic 80% Student Results Individual Assign. for stud. Staff Seminar Attend FDP Evaluation Pattern Learn Linux & C</p> <p>Research Reg. for Post-doc Reg. for D.Sc Journal Publication Patents Guide Ph.D</p>	<p>Administrative Sal. on Performance. 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

Guidelines for any Student to become a “PROFESSIONAL”

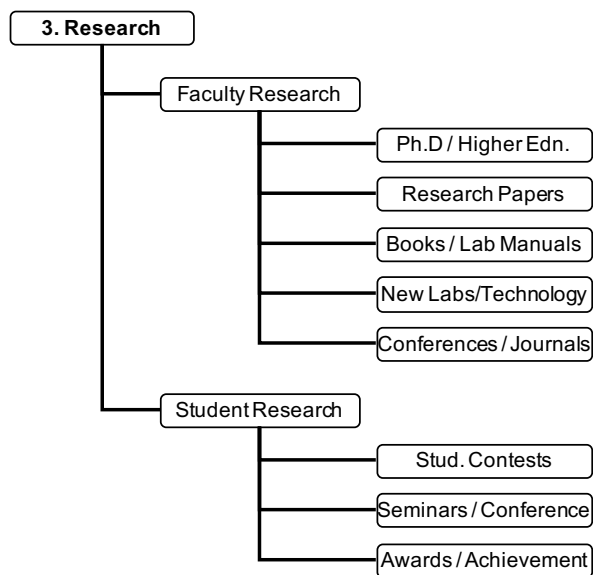


<ul style="list-style-type: none"> ▪ Do a Physics Project ▪ Do a Branch Project ▪ Attend English Conversation Class ▪ Learn Linux ▪ Learn C / C++ / Java 	<ul style="list-style-type: none"> ▪ Do a 'Funda' Project ▪ Learn Advanced Linux ▪ Get Software Training ▪ Do a Term Paper ▪ Attend English Conversation Class 	<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 	<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
<ul style="list-style-type: none"> ▪ Hobby building ▪ Involve NCC/NSS Activity ▪ Sports 1hr compulsory 	<ul style="list-style-type: none"> ▪ Yoga / Fitness ▪ Ethics / Culture ▪ Sports 	<ul style="list-style-type: none"> ▪ Yoga / Fitness ▪ Ethics / Culture ▪ Sports 	<ul style="list-style-type: none"> ▪ Foreign Lang. Class ▪ Yoga / Fitness ▪ Ethics / Culture ▪ Sports
1 Year	2 Year	3 Year	4 Year

Role & Duties of Heads of Departments



Role & Duties of Heads of Departments





Leaders in Education

- 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

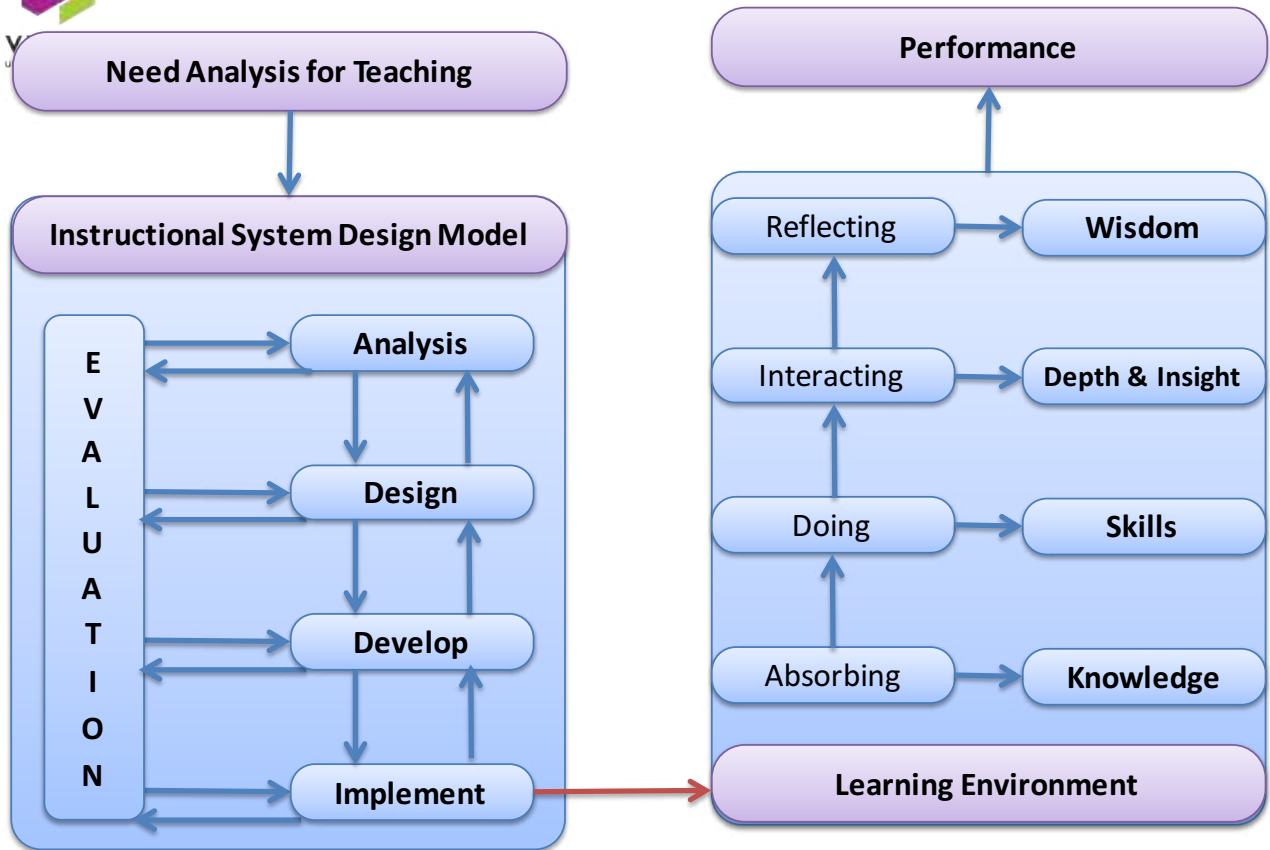


Part – 8

Cone of Learning & Instructional System Design



Instructional System Design Model



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”

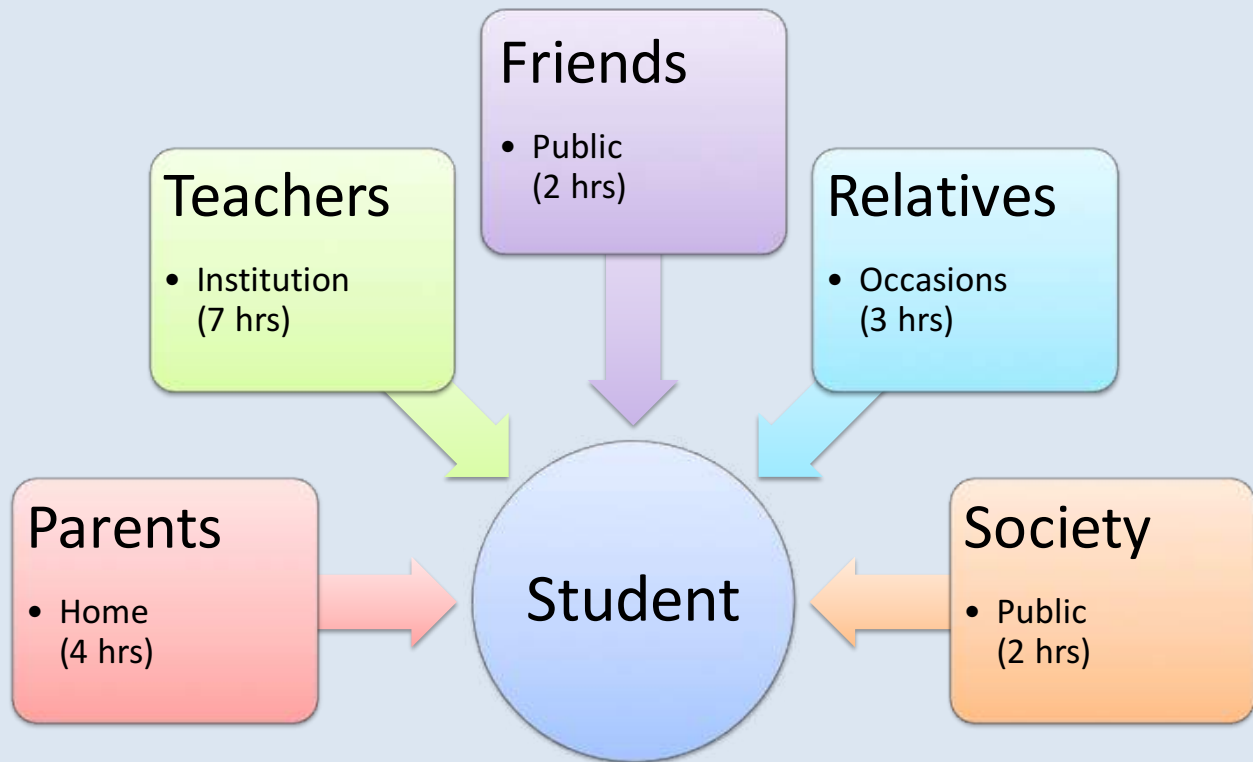
Its far easier to shape good behavior
than is to manage bad behavior

Theories in Discipline

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

Influence on Students



Handling Common Behavioral Situations

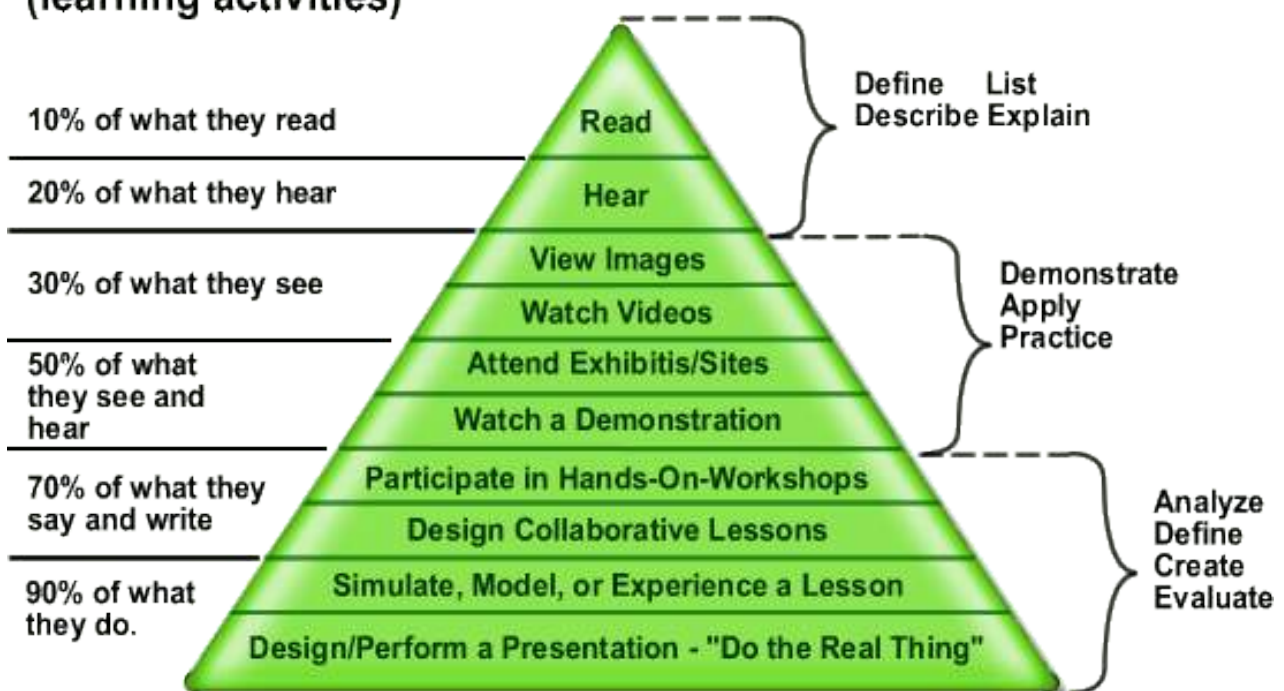
Diagnosis			Remediation		
Goal of Student	What 'Behavior' is Saying	Teachers/Parents 'Emotional Response'	Reaction by Student to Teachers/Parents Mistaken Responses & Measures	Effective Immediate Response	Remediating Measures
	1	2	3	5	6
Seeking undue ATTENTION	I only count in this world when I keep you 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*

- 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 ?

**People generally
remember...
(learning activities)**

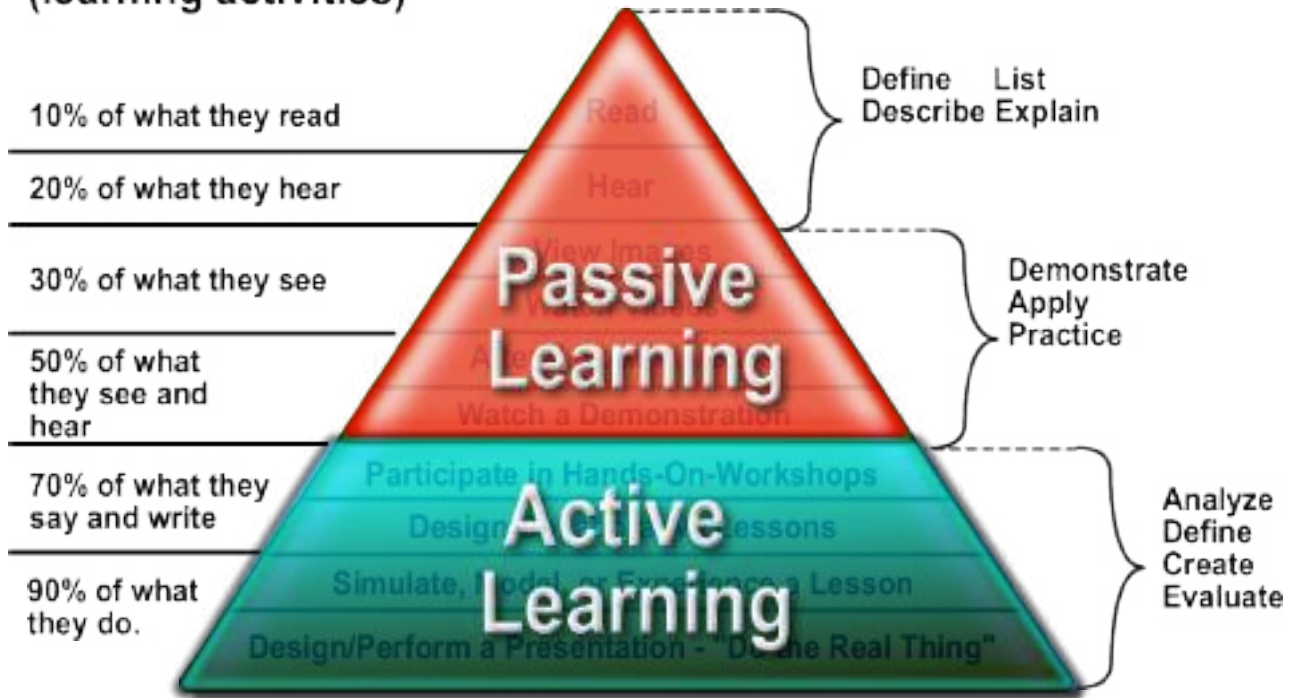
**People are able to...
(learning outcomes)**





People generally remember...
(learning activities)

People are able to...
(learning outcomes)



Dale's Cone of Learning



Part – 9

Pillars to Succeed

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

Introducing - SUCCESS

- 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.”



8 Pillars of Success

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 oneself** 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.



Beliefs

Limiting (Negative) Beliefs

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



Positive Beliefs

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




Cultivating “Empowering Beliefs”

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.

1. Sternberg-Wagner – “Thinking Styles Assessment”



– Robert J. Sternberg, Psychometrician, Oklahoma State University

– “Theory of Mental Self-Government”, “Triarchic Theory of Intelligence”, “Theory of Cognitive Styles”

2. Howard Gardner – “Multiple Intelligence Assessment”

– American Developmental Psychologist, Harvard University, “Theory of Multiple Intelligences”

3. Carl Gustav Jung – “Personality Assessment”

– Swiss Psychiatrist - founder “Analytical Psychology”

– Paul T.Costa and Robert McCrae – “Big-5 Personality Test”, Trait Psychology Experts (APA Approved)

4. Richard Felder – “Learning Styles Assessment”

– Chemical Eng. Prof., NCSU, “Theory of Learning Styles”, Global Award for Excellence in Eng. Education, IFEEES

5. Clement Glen – “Holistic Thinking Pyramid”

– Professor, Educational Administration, Prairie View, A&M University

6. Benjamin Samuel Bloom – “Blooms Taxonomy”

– Educational Psychologist, “Theory of Mastery-Learning”

7. Malcolm Knowles – “Andragogy”

– Adult Educator, “Theory of Andragogy”, “Humanist Learning Theory”

8. Stewart Hase and Chris Kenyon - “Heutagogy”

– Adult Educator, “Theory of Andragogy”, “Humanist Learning Theory”

9. Kazutoshi Tanaka – “Ergonagy”

– Educational Psychologist, Polytechnic University, Japan

10. Abdul Karim Bangura – “Ubuntugogy”



– Research Methodologist, Howard University, PhD in Political Science, PhD in Development Economics

– PhD in Linguistics, and a PhD in Computer Science, Ex President-UN Ambassador

11. Edgar Dale – “Cone of Learning”

– Educationist, Ohio State University, “Cone of Experiences”

12. Charles Bonwell and Eison – “Active Learning”

– Professor of History, Southeast Missouri State, “Active Learning in Classrooms”

13. David Kolb – “Experiential Learning”

– Educational Theorist, “Experience Based Learning System”, “Learning Style Inventory”

14. Robert Gagne – “9 Events of Instruction”

– Educational Psychologist, “Conditions of Learning”, “Five Categories of Learning”, “Eight ways to Learn”

15. John Sweller – “Cognitive Load”

– Educational Psychologist, Univ of Adelaide, “Cognitive Load Theory and Instructional Design”

16. Skinner, Redl, Wattenberg, Kounin, Jones, Glasser, Ginott, Dreiker, Canter – “Discipline Theories”

– Behavior Psychologists

17. Tony Peter Buzan - “Mind-Map”

– Educational Consultant, “Mental Literacy”, “iMindMap”

18. Adam Sicinski - “Eight Pillars of Success”

– Visual Thinking Coach, “IQ Matrix”, “Mind Map Art”

19. Rhonda Byrne – “Law of Attraction”

– Writer, “The Secret”, “The Power”, “The Magic”

Preach only if you Practice !

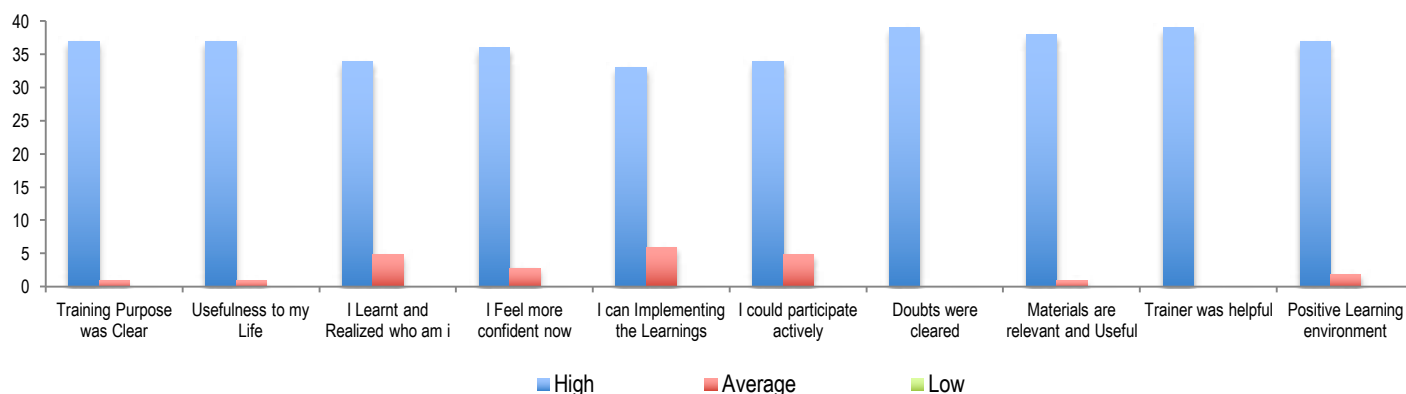
14 – 16 April 2016

Feedback

Number of Respondents: 39

	High			Average				Low		
	10	9	8	7	6	5	4	3	2	1
Training purpose was clear	39			0				0		
Usefulness to my life	39			0				0		
I learnt and realized who I am	36			3				0		
I feel more confident now	37			2				0		
I can implement the learning's	37			2				0		

	High			Average				Low		
	10	9	8	7	6	5	4	3	2	1
I could participate actively	37			2				0		
Doubts were cleared	37			2				0		
Materials are relevant and useful	35			4				0		
Trainer was helpful	39			0				0		
Positive learning environment	39			0				0		



- 1 We were able to understand the importance of Education
- 2 Similar kind of Workshop can be conducted once in every two months
- 3 This workshop needs to be extended for one week
- 4 We were able to know the active learning strategies and techniques
- 5 Scientific Educational Practices needs to be conducted for all faculty members in a periodical interval of time
- 6 Provide similar kind of programs for students about the importance of behavioral and learning
- 7 Effective learning methodologies should be taught to students



VISHNU
UNIVERSAL LEARNING



WORKSHOP ON IMMERSIVE INSTRUCTIONAL TECHNOLOGY (IIT) – LEVEL 1

VEDIC

VISION

To allow faculty members to be aware of various productivity tools and Learning Management Systems while identifying free, open source, app based and cloud base resources to enable them to use technology in a ubiquitous manner.

ABOUT THE PROGRAM

The IIT – Level 1 workshop is an entirely activity based workshop which will help faculty in finding free to use and app based tools and to use these tools to develop and deploy cohesive sessions, which include, practice on asset creation, facilitating discussion and collaboration, guiding student inquiry and assessment creation.

TARGET PARTICIPANTS

All faculty are encouraged to attend the workshop. This workshop is envisaged to benefit faculty who have especially attended the TTT program. Participation limited to 30 faculty members

OBJECTIVES

At the end of this session faculty will be able to

1. Identify various open source and app based productivity and LMS tools to use in their own classes.
2. Describe the challenges and tricks to working in a hybrid class setup.
3. Illustrate the roles of these tools in all learning activities they plan to offer.
4. Design a session on LMS with assets, discussion prompts and assessments.

PARTICIPANT MATERIALS

Participants will be provided with

1. A desktop computer for use at the session.
2. A notepad

Participants are required to bring

1. A thumb drive to save their 3 days of work for future reference.

FACILITATOR

Dr. Balaguruprasad Narayanan has a Ph.D. in Education with an emphasis on Curriculum Design and Instructional Technology. Indiana State University. He has been in the educational field since 2005. While performing a variety of roles in Indiana State University, including Instructional Designer, Training module developer, faculty trainer and lecturer, he has also taught classes on instructional design, assessment design, educational research and media technology, while working with university level teams on accreditation and hiring. He is also involved with the MHRD through the Pandit Madan Mohan Malviya National Mission on Teacher and Training (PMMMNMTT) with IIT Madras. In this capacity he has developed and conducted faculty training modules in the area of Instructional Technology, active learning pedagogies and assessment. He has also been invited as an expert external resource person by various colleges under TEQIP and ISTE schemes. Currently at VEDIC, he works with faculty on Instructional Technology use and educator certification.

Research interests – Instructional Technology use by faculty, institutional technology policy and procurement, Faculty development.

SCHEDULE

- **Day 1 - Morning**
 - ✓ Hybrid Techniques
- **Lunch**
- **Day 1 - Afternoon**
 - ✓ Productivity Tools
- **Day 2 - Morning**
 - ✓ LMS Assets
 - ✓ LMS Collaboration
- **Lunch**
- **Day 2 - Afternoon**
 - ✓ LMS Assessments
 - ✓ Session Design
- **Day 3 - Morning**
 - ✓ Session Design
 - ✓ Session Implementation
- **Lunch**
- **Day 3 - Afternoon**
 - ✓ Session Implementation



WORKSHOP ON STUDENT LEARNING IN INSTRUCTIONAL DESIGN (SLIDE) – LEVEL 2

VEDIC

VISION

To allow faculty members to effectively design formative and summative assessment questions in line with latest best practices and educational research with the purview of Outcomes, attainment and accreditation.

ABOUT THE PROGRAM

The SLIDE 2 workshop is an interactive and activity based 3-day workshop designed to extend the lessons of outcomes and matching assessments to outcomes during the course of the semester. The workshop guides faculty through the process of question types, best practices of question creation and question paper design within the purview of student attainment and accreditation standards.

TARGET PARTICIPANTS

Participants will be selected based on their previous work in III, OBE and SLIDE workshops.

WORKSHOP OUTCOMES

Terminal Workshop Outcome: - The participant will be able to develop a bank of formative and summative questions, design a question paper with these questions and use the student results to ascertain course outcomes attainment.

Subordinate Outcome 1: - Classify assessment items into constructed response, selected response and performance response items.

Subordinate Outcome 2: - Design all four types of selected response items.

Subordinate Outcome 3: - Design all two types of constructed response items.

Subordinate Outcome 4: - Design a question paper with the appropriate number of questions and question types, equally representing all outcomes and Bloom's taxonomy levels.

Subordinate Outcome 5: - Design a scoring schema for all types of questions previously designed.

Subordinate Outcome 6: - Correctly calculate course outcomes attainment for an entire course within 1 section.

SCHEDULE

- **Day 1 - Morning**
 - ✓ Psychometric Tests
- **Lunch**
- **Day 1 - Afternoon**
 - ✓ Students' So-What??

- **Day 2 - Morning**
 - ✓ Instructional Design Models
- **Lunch**
- **Day 2 - Afternoon**
 - ✓ Matching Activities to Thinking Styles
 - ✓ Matching Activities to Multiple Intelligences

- **Day 3 (Design Day)**
 - ✓ Designing Classroom Activities based on Thinking Style and Multiple Intelligences

PARTICIPANT MATERIALS

Participants will each be provided with

1. A desktop computer for use at the session.
2. A Note Pad

Participants are required to bring

1. A thumb drive to save their 3 days of work for future reference.

FACILITATORS

Dr. Balaguruprasad Narayanan has a Ph.D. in Education with an emphasis on Curriculum Design and Instructional Technology. Indiana State University. He has been in the educational field since 2005. While performing a variety of roles in Indiana State University, including Instructional Designer, Training module developer, faculty trainer and lecturer, he has also taught classes on instructional design, assessment design, educational research and media technology, while working with university level teams on accreditation and hiring. He is also involved with the MHRD through the Pandit Madan Mohan Malviya National Mission on Teacher and Training (PMMMNTT) with IIT Madras. In this capacity he has developed and conducted faculty training modules in the area of Instructional Technology, active learning pedagogies and assessment. He has also been invited as an expert external resource person by various colleges under TEQIP and ISTE schemes. Currently at VEDIC, he works with faculty on Instructional Technology use and educator certification. Research interests – Instructional Technology use by faculty, institutional technology policy and procurement, Faculty development.

Dr. Anupama Ghattu has a PhD in Education with an emphasis on Higher Education from Indiana State University) has been in the educational field since 2010. She has performed a variety of roles in Indiana State University, including Instructional Designer, Training module developer, student trainer and researcher. She has taught core computer science courses such as computer networking and python programming. She has also conducted faculty development programs in private colleges in India. She has worked extensively with students on use of hand-held/mobile wireless technologies for effective learning and collaboration. She believes that the teacher should be a facilitator, role model and a guide. She has research papers published in International conferences. Currently at VEDIC she works on content development and educational technology. Research interests – Students' use of mobile technology in the classroom, students' learning outcomes and attitudes, ubiquitous learning technologies.



WORKSHOP ON UNCONSCIOUS BIAS IN THE WORK PLACE (UBW)

VEDIC

VISION

To allow faculty members to be aware of and identify behaviors that can be perceived as bias by colleagues and to consciously modify these behaviors to promote a more productive and fair work environment.

ABOUT THE PROGRAM

The UBW workshop is an interactive workshop designed to pique awareness among co-workers in a professional setting pertaining to the sources of unconscious bias such as instinct, stereotypes and groupism. After this awareness is created, the workshop will use role play techniques to break the bad habits that lead to these biases and inculcate good habits that lead to a fair work place.

TARGET PARTICIPANTS

All faculty who have administrative responsibilities and those who are involved in leadership roles, supervisory roles and team decision making are encouraged to attend this workshop. Participation limited to 40 faculty members.

OBJECTIVES

At the end of this session faculty will be able to

1. Identify bias in a simulated situation
2. Identify the types and sources of bias
3. Describe behaviors associated with bias
4. Demonstrate techniques to suppress bias behaviors
5. Construct fair professional behaviors

PARTICIPANT MATERIALS

Participants will be provided with

1. 4 Name Tents for role play.
2. A pack of 20 Note cards for Interactive Sessions and Minute Assessments
3. 3 Pens (Black, Red and Green)

FACILITATOR

Dr. Balaguruprasad Narayanan has a Ph.D. in Education with an emphasis on Curriculum Design and Instructional Technology. Indiana State University. He has been in the educational field since 2005. While performing a variety of roles in Indiana State University, including Instructional Designer, Training module developer, faculty trainer and lecturer, he has also taught classes on instructional design, assessment design, educational research and media technology, while working with university level teams on accreditation and hiring. He is also involved with the MHRD through the Pandit Madan Mohan Malviya National Mission on Teacher and Training (PMMMNTT) with IIT Madras. In this capacity he has developed and conducted faculty training modules in the area of Instructional Technology, active learning pedagogies and assessment. He has also been invited as an expert external resource person by various colleges under TEQIP and ISTE schemes. Currently at VEDIC, he works with faculty on Instructional Technology use and educator certification.

Research interests – Instructional Technology use by faculty, institutional technology policy and procurement, Faculty development.

SCHEDULE

- **Morning 1 (Interactive Session)**
 - ✓ Be aware of bias
 - ✓ How and when does bias develop
- **Tea**
- **Morning 2 (Role Play)**
 - ✓ Brain and categorization
 - ✓ Stereotypes and groups
 - ✓ Types of biases
- **Lunch**
- **Afternoon 1 (Interactive Session)**
 - ✓ Habit Breaking
 - ✓ Be Calm and List Instincts
 - ✓ Analyze Evidence
- **Tea**
- **Afternoon 2 (Role Play)**
 - ✓ Mock Meeting
 - ✓ Activity participant and observer notes
 - ✓ Discussion and Lessons Learnt

Dear sir/Madam

Self-management skills are an online interactive and motivation program from Vedic going to be conducted by behavioral specialists Ms. Jbaselvi madam and Mr. Augustine sir on 3/08/20.

10 to 1 In this students interacted with honorable chairman sir and respected Vice-chairman sir about themselves how they expressed how they utilized lock down time, what are the on line courses completed and pursuing, what additional courses or internships attended by them, how they are attending online classes.

Students were trained how to plan and set their goals and how they will achieve their skills in an effective way.

Session details are given below for your reference :

Topic: Online Interaction on Self Management Skills (SMS)

Participants: *Final Year MCA students from BVRC, Bhimavaram (Batch 1)*

Date & Time: 3rd August 2020 10:00 AM

Microsoft Team Meeting id:

https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZTg5MTQyNzAtMjQ0OC00MTU4LTg3YjEtOWI3NzBkNWY0ZmQ0%40thread.v2/0?context=%7b%22Tid%22%3a%22b8593818-1c51-461d-ac9a-c1192e67c2dd%22%2c%22Oid%22%3a%22387b5d2d-60ae-45af-ab38-11ec776d4958%22%7d

VEDIC



Schedule for Student Interaction on "Self Management Skills" (SMS) August 2020			
SLOT I			
Date & Day	Participants from	Time	No. of Students
3rd August 2020 Monday	Final Year MCA students from BVRC, Bhimavaram (Batch 1)	10.00 - 12.30	60
4th August 2020 Tuesday	III Year Students from SVECW, Bhimavaram (Batch 9)	10.00 - 12.30	60
5th August 2020 Wednesday	III Year Students from BVRIT, Hyderabad (Batch 10)	10.00 - 12.30	60
6th August 2020 Thursday	III Year Students from BVRIT Narsapur (Batch 14)	10.00 - 12.30	60
7th August 2020 Friday	III Year Students from SVECW, Bhimavaram (Batch 10)	10.00 - 12.30	60
10th August 2020 Monday	III Year students from VIT, Bhimavaram (Batch 9)	10.00 - 12.30	60
11th August 2020 Tuesday	III Year students from BVRIT, Narsapur (Batch 15)	10.00 - 12.30	60
12th August 2020 Wednesday	III Year students from SVECW, Bhimavaram (Batch 11)	10.00 - 12.30	60
13th August Thursday	III Year students from BVRIT, Hyderabad (Batch 11)	10.00 - 12.30	60
14th August 2020 Friday	III Year students from VIT, Bhimavaram (Batch 11)	10.00 - 12.30	60

Guidelines for students online interaction

Kindly instruct the students to **strictly adhere to the following guidelines** at all times during the online session:

1. Online Sessions are facilitated via **"Microsoft Teams"** and hence the students have to download "Microsoft Team" app prior to the session.
2. Students have to enter the Microsoft Team platform with their **"Name_Roll No"** while login itself.
3. Students **have to stay throughout the session** and in case of any technical or other unprecedented difficulties, they have to inform the VEDIC faculty straight away.
4. Instruct the students to use the chat option as well as to use their mic to interact with Chairman sir and VEDIC faculty.



August 3

VEDIC

vedic.hyd



70 likes

vedic.hyd #VisionBoardVEDIC

Final Year MCA Students from #bvrc

#VEDICSelfManagementSkills

August 3

VEDIC

vedic.hyd



← Posts

VEDIC **vedic.hyd**



3/9



70 likes

vedic.hyd #VisionBoardVEDIC

Final Year MCA Students from #bvrc... more

August 3

VEDIC **vedic.hyd**





70 likes

vedic.hyd #VisionBoardVEDIC

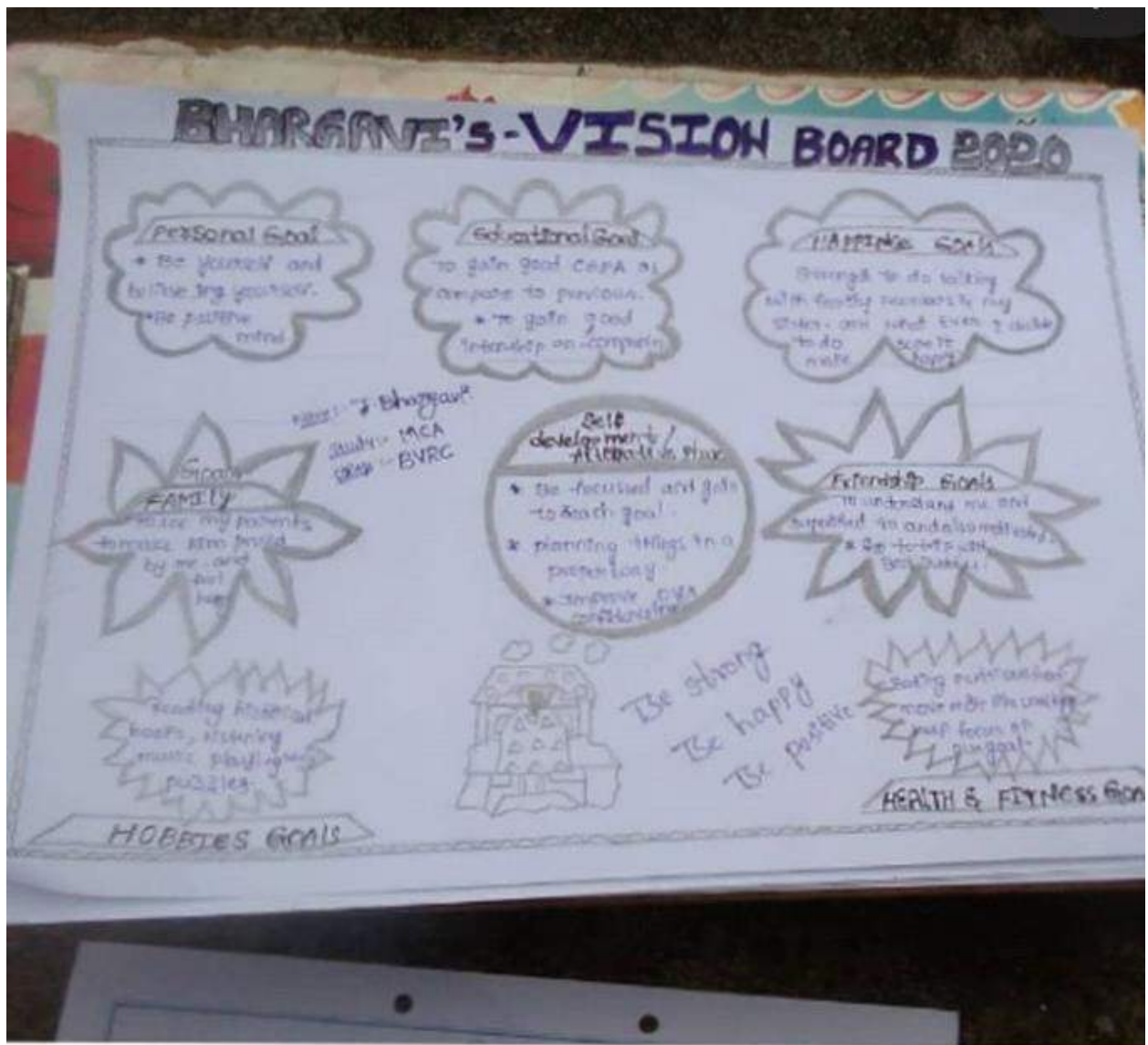
Final Year MCA Students from #bvrc... more

August 3



vedic.hyd





70 likes

vedic.hyd #VisionBoardVEDIC

Final Year MCA Students from #bvrc... more

August 3



vedic.hyd



Screenshot saved
Tap to view your screenshot



SHARE EDIT DELETE



Report...

Turn on Post Notifications

Copy Link

Share to...





70 likes

vedic.hyd #VisionBoardVEDIC

Final Year MCA Students from #bvrc... more

August 3



vedic.hyd