CHAPTER I

PART A

GENESIS OF THE STUDY

1.1 INTRODUCTION

Institutions can be viewed as systems; administration can also be defined as human action, including design, to facilitate the production of useful outcomes from a system. This view opens the opportunity to ‘administrate’ oneself, a prerequisite to attempt to manage others. Academic Administrator can also refer to the person or people who perform the acts of Academic activities. Such Academic Administrators tend to be more mobile than faculty members. They have less flexibility and more structured work schedule. It is very important to be sensitive to this concern with shared governance and to have patience and a sense of humor. Mental Functions, Mental Forms and Decision Making Styles of Academic Administrators are very much influenced by the Brain Hemisphericity. Brain Hemisphericity plays a proximate role in rendering the administrative responsibilities through proper Mental Forms and appropriate Mental Functions. There is a complimentarily exists between Brain Hemisphericity and Mental Functions and Forms.

The Chambers of the Brain Hemisphericity occupies an important role in activating different Mental Functions and Mental Forms. The Mental Functions of the brain activates the different Mental Forms in the process of Academic Administrations. The Mental Functions and Mental Forms are compatibility in nature execute the administrative functions of planning, organizing, staffing, controlling (Posdco), etc. The study aims to analyse the influence of Brain Hemisphericity in activating different Mental Functions and Mental Forms. The study further traces the influence of Brain Hemisphericity in taking administrative decision. Hence the present study is contemplated to explore the “Mental Functions, Mental Forms and Decision Making Styles related to Brain Hemisphericity of Academic Administrators”. The present chapter deals with
theoretical aspects of the study and also discusses about the back drop of the present study.

1.2 NEED FOR THE STUDY

The Academic Administrators play a dynamic role in designing the Academic Activities and also for the smooth functioning of the institution. The success of Academic excellence is based on considerable work rendered by the Academic Administrators, which is based on the systematic planning and procedure.

The successful brain accomplishment of Academic Administrators depends on the influence of Hemisphericity, Mental Functions, Mental Forms and Decision Making Styles. Indeed there is complementarily and compatibility exists between Brain Hemisphericity and Mental Functions and Mental Forms.

The role of Hemisphericity is prudent and it does functions in determining man’s behavior. Hemisphericity which acts as a mental Self-Government governs over all behavior and influence man’s functioning style according to the nature of the work.

Brain as a sanctum sanctorum in the cranial, influences human’s functioning style as Executive, Legislative and Judicial in approach. The functioning influences Decision Making Styles.

There is a compatibility existing between and among the Brain Hemisphericity with respect to the Mental Forms, Mental Functions and Decision Making styles of the Academic Administrators.

The findings of Neuro science also concludes that people with different Mental Functions such as Executive, Legislative and Judiciary have various abilities which is influenced by the Brain Hemisphericity. The ability to monitor and change behavior as needed and to plan further behavior when faced with normal task and situation vary based on Mental Forms such as Monarchic, Hierarchic, Oligarchic and Anarchic Forms. Indeed the Mental Forms and Mental Functions were influenced by the Brain chambers.
The Decision Making Styles are preplanned procedure which needs high brain power to tackle appropriate decision. Brain influences styles in Decision Making, Right Brain Dominants differ in their styles whereas with that of Left Brain Dominants and Integrated Brain Dominants.

Hence the present study has been specially intended to study the Brain Hemisphericity of Academic Administrators and the influence of Mental Function, Mental Forms and Decision Making Styles in activating for successful Brain accomplishment.

1.3 PROBLEM OF THE STUDY

The present study has been specially intended to study the Brain Hemisphericity of Academic Administrators. The relative contribution of Personal variables (Designation, Qualification, Department, Experience, Age, Area, Gender, Blood Group, Institutions) and Research variables. (Mental Functions, Mental Forms and Decision Making Styles) towards the Brain Hemisphericity among Academic Administrators is investigated in this study.

The study is explorative in nature, aim to analyse the influences of Mental Functions, Mental Forms and Decision Making Styles related to Brain Hemisphericity. The study further focuses that how the brain emancipate for the activation of Mental Functions, Mental Forms and Decision Making Styles related to Brain Hemisphericity for successful administrative process.

1.4 OPERATIONAL DEFINITIONS OF THE STUDY

Brain Hemisphericity

The portion of the brain involved in guiding activities requires manual dexterity; for those who are right-handed, the left hemisphere is dominant and for those who are Left – handed, the Right Hemisphere is dominant.

Lateralization is the idea that the two halves of the brain's cerebral cortex, left and right, execute different functions and ability to use the proper mode of thinking when performing particular tasks.
Integrated Brain Hemisphericity is mainly responsible to manage emotional climate. In this Hemisphericity imaging is vital. Integrated Brainers can perform visualization, drawing and dramatizations. Most individuals have no distinct preference for any one style of thinking. They equally adapt both the hemispheres.

In general, the left hemisphere is dominant in language: processing what you hear and handling most of the duties of speaking. It's also in charge of carrying out logic and exact mathematical computations. When you need to retrieve a fact, your left brain pulls it from your memory.

The right hemisphere is mainly in charge of spatial abilities, face recognition and processing music. It performs some math, but only rough estimations and comparisons. The brain's right side also helps us to comprehend visual imagery and make sense of what we see. It plays a role in language, particularly in interpreting context and a person's tone.

- **Mental Functions**

  The Mental process of the brain ensemble the symbolic operations, covering perception, memory, creation of imagery and thinking. The brain governs the functioning style of man through the process of mind namely the executive style, Legislative and Judicial style.

- **Mental Forms**

  A level of psychological well-being, or an absence of a mental disorder; it is the "psychological state of someone who is functioning at a satisfactory level of emotional and behavioral adjustment". From the perspective of positive psychology or holism, mental health may include an individual's ability to enjoy life, and create a balance between life activities and efforts to achieve psychological resilience.

- **Decision Making Styles**

  Decision-making can be regarded as the cognitive process resulting in the selection of a belief or a course of action among several alternative possibilities.
Every decision-making process produces a final choice that may or may not prompt action. Decision-making is the study of identifying and choosing alternatives based on the values and preferences of the decision maker. Decision-making is one of the central activities of management and is a huge part of any process of implementation.

1.5 OBJECTIVES OF THE STUDY

1. To find out the Mental Functions of Academic Administrators, with Right, Left and Integrated Brain Hemisphericity.

2. To find out the Mental Forms of Academic Administrators, with Right, Left and Integrated Brain Hemisphericity.

3. To find out the Decision Making Style of Academic Administrators, with Right, Left and Integrated Brain Hemisphericity.

4. To find out whether a significant difference exist in the Mental Functions of Academic Administrators, with Right, Left and Integrated Brain Hemisphericity based on Gender, Designation, Qualification, Department, Age, Experience and Blood Group.

5. To find out whether a significant difference exist in the Mental Forms of Academic Administrators, with Right, Left and Integrated Brain Hemisphericity based on Gender, Designation, Qualification, Department, Age, Experience and Blood Group.

6. To find out whether a significant difference exist in the Decision Making Style of Academic Administrators, with Right, Left and Integrated Brain Hemisphericity based on Gender, Designation, Qualification, Department, Age, Experience and Blood Group.

7. To find out whether there is any significant relationship between Mental Functions and its Dimensions and other variables with respect to their Right, Left and Integrated Brain Hemisphericity.
8. To find out whether there is any significant relationship between Mental Forms and its Dimensions and other variables with respect to their Right, Left and Integrated Brain Hemisphericity.

9. To find out whether there is any significant relationship between Decision Making Styles and its Dimensions and other variables with respect to their Right, Left and Integrated Brain Hemisphericity.

1.6 ASSUMPTIONS OF THE STUDY

1. Academic Administrators may be activated by Executive style of Mental Function.

2. Male Academic Administrators may be more of Executive Mental Function compared to Female Academic Administrators.

3. The most experienced category dominates with Integrated Brain activated by all the Mental Functions.

4. The Integrated Brainers with O-blood group may be dominant and activated by all the Mental Functions. Integrated O-group Academic Administrators may dominate by using all the four Mental Forms.

5. The Academic Administrators may use all the Mental Forms for their successful administrative process.

6. Anarchic Mental Form may be dominantly seen among the HM/PR category.

7. The Academic Administrators who are too young may usually have Oligarchic Mental Form followed by Monarchic Mental Form.

8. The Integrated Brainers above 10 years of experience may possess all the Mental Forms.

9. The Right and Integrated Brain Academic Administrators are competent in Decision Making Styles.
10. Academic Administrators with Ph.D qualification are more dominant and flexible in their Decision Making Styles on the whole.

11. Academic Administrators with age above 50 years with Integrated Brain Dominance may have extra-ordinary Decision Making capacity.

1.7 SCOPE OF THE STUDY

Management is a complex technique for operating an organization in an orderly, efficient and streamlined fashion in this modern jargoned world. Indeed it is a trickish and ticklish one.

An organization, whether Industrial, Business, Private or the Government, its successful management is the rudimentary key factor to achieve desired goals. The role of management determines its significance and it is clearly evident that the role of management in a modern society has forced a new outlook and dimension for professional proficiency. The vast development of giant industrial and commercial organizations, moral and social ethics of the present day society and the concept of welfare state have created complex problems for the Administrators and Executives and hence the management has to articulate highly skilled persons for this challenging profession which required highly intricate and sophisticated techniques.

Management of an office/organization in the present days not only depend upon electronic brain alone, but also depends upon highly prudent human brain which can govern overall skilled and efficient network of the organization, including the operation of the electronic brains. Thus successful role and importance of human brain emphasizes its significance in this aspect.

Every organization formulates its own forms and functioning styles of management in Administrative and Executive fields and hence individuals who have such mental capacity to function as administrators and executives in relation to the norms laid down by the organization must be selected and placed in the appropriate field for successful and profitable conduct of the business.
Dovetailing the forms, functioning and styles of Managers / Administrators / Executives mental self Government in relation to the various functions of an organization would alleviate the problems of the organization. In addition, it would also help to establish good inter-personnel relationship, mutual understanding and co-operation between Managers / Executives / Administrators and the workers. Thus the dominance of hemisphericity functions of brain, in the individuals who occupy such positions, plays an important and significant role for a successful and smooth functioning of the organization. Then only the organization would be able to gain good name, popularity and trust of the people and also would be able to gain to the maximum extent from the minimum investment. (Venkataraman 1989)

The overall activities, of the man including the present, and the future are based upon the mental self govt. of the Man, because it is the brain that activates the man for different types of functions. Thus taping the man power from the right person in the right place is very much important for the overall development of an organization. Hence it is important to select right scientific lines. The present study is undertaken based on this back ground, to identify Mental Functions, Mental Forms and Decision Making Styles related to Brain Hemisphericity of Academic Administrators.

1.8 DELIMITATIONS OF THE STUDY

- This study is confined to the State of Tamil Nadu only.
- The sample was limited to 1000 only.
- The sub-sample was limited to Gender, Designation, Qualification, Department, Experience, Age and Blood Group only.
- The sample was restricted to regular stream of Academic Administrators alone.
1.9 CHAPTERIZATION

Chapter I is subdivided into Part A and Part B where Part A proceeds with Genesis of the study and Part B progresses with Backdrop of the study. Part A includes introduction, need for the study and problem of the study, operational definitions, objectives, assumptions, scope, limitations, chapterization and conclusion. Part B deals with Introduction, theories of Academic Administration, Brain Hemisphericity, Mental Functions, Mental Forms and Decision Making Styles of Academic Administrators.

Chapter II Review of related studies, the investigation, similar to the present study, carried out in India and aboard have been summarized and presented in the form of abstracts.

Chapter III gives the Statement of the problem, Operational definitions, Significance of the study, the Research design, Hypotheses of the study, Method of the study, the Procedure of construction of Mental Functions Questionnaire, Mental Forms Questionnaire and Decision Making styles inventory. Collection of data, Statistical techniques used and Delimitations of the study were discussed.

Chapter IV Consists of details regarding Analysis of data, Results of statistical analysis and the Interpretation of results.

Chapter V presents, summary of the study in retrospect, Major findings, Conclusion, Educational Implications of the study and Suggestions for further research. Bibliography is given in the following chapter V. The appendices containing copies of the tools, scoring key etc., are also included next to Bibliography.

1.10 CONCLUSION

The present day administrative process and procedure are tricky and ticklish one which needs contribution of Brain Hemisphericity and related Mental Functions and Forms. Only an administrator with organized brain embedded with Mental Forms and Functions will perform in a competent way. The genesis of the study tries to establish these facts.
CHAPTER I

Part B

BACK DROP OF THE STUDY

1.11 INTRODUCTION

Administration is the art of getting things done through people. Organization and coordination of the activities of an institution is usually governed by the chief executives. Administration is a complex technique for operating an organization in any orderly, efficient and streamlined fashion. The nervous system controls every part of our daily life, from breathing and blinking. This brain has different hemisphere, different forms and different functions based on all this, the administrators function in managing their institution. Administrators nowadays, doesn’t only depend on human brain which can govern overall skilled and efficient network of the organization. Analysis could be done to elucidate what sort of style or function of brain does academic administrators of various educational institutions have and which style will be effective could also be identified to appoint an efficient administrator. This study may help us to understand the usage of the brain which could scientifically improve the administrative skills, brain dominance, different mental forms and decision making style.

1.12 ACADEMIC ADMINISTRATORS

Colleges, schools, academies and for that matter all the educational institutions need someone to organize and manage their activities, their administration and their functioning. The one who perform such deeds are called as academic administrators. The academic administrator works in various departments or faculties or small units and takes care of activities like quality assurance, admissions, data management, finance, examinations and human resources.
An academic administrator’s job includes a variety of mooting tasks, ranging from general duties to specific ones. Among these, tasks are assisting in recruitment, working in sectors like governing bodies, academic board and task groups, coordinating examination and assessment processes, providing administrative support (to tutors, lecturers, teachers etc.), contributing to policy making and planning, supervising staff, drafting and interpreting regulations, maintaining high levels of quality assurance, purchasing goods and equipment, dealing with queries and complaints procedures, managing budgets, processing invoices, liaising with other administrative staff and other related activities. Apart from the responsibilities already mentioned, an academic administrator has to safeguard and promote the welfare of the student and teachers to participate in training, for the overall development of the institution. To ensure the safety of the children in the territory is one of the duties of an academic administrator.

An academic administrator should possess, good organizational skills, good numeric skills, good data storage skills, good design skills and good reporting and recording skills. Being an academic administrator is a challenging job, which presupposes a lot of stress and responsibilities. Nevertheless, for those possessing the right skills and knowledge, this might be the right job.

Accordingly the investigator has decided to take the subjects as Academic Administrators to know how they work for the betterment of the institution.

1.13 THE BRAIN

The nervous system is your body's decision and communication center. The central nervous system (CNS) is made of the brain and the spinal cord and the peripheral nervous system (PNS) are made of nerves. Together they control every part of your daily life, from breathing and blinking to help you memorize facts for a test. Nerves reach from your brain to your face, ears, eyes, nose, and spinal cord... and from the spinal cord to the rest of your body. Sensory nerves gather information from the environment; send that information to the spinal cord, which then speed the message to the brain. The brain then makes sense of that message and fires off a response. Motor neurons deliver the instructions from the brain to
the rest of your body. The spinal cord, made of a bundle of nerves running up and down the spine, is similar to a superhighway, speeding messages to and from the brain at every second.

The brain is made of three main parts: the forebrain, midbrain, and hindbrain. The forebrain consists of the cerebrum, thalamus, and hypothalamus (part of the limbic system). The midbrain consists of the tectum and tegmentum. The hindbrain is made of the cerebellum, pons and medulla. Often the midbrain, pons, and medulla are referred together as the brainstem.

The Cerebrum: The cerebrum or cortex is the largest part of the human brain, associated with higher brain function such as thought and action. The cerebral cortex is divided into four sections, called "lobes": the frontal lobe, parietal lobe, occipital lobe, and temporal lobe. Here is a visual representation of the cortex:

![Figure 1.1 Showing the Lobes of the Cerebral Cortex](image)

- Functions
  - Frontal Lobe: associated with reasoning, planning, parts of speech, movement, emotions, and problem solving
  - Parietal Lobe: associated with movement, orientation, recognition, perception of stimuli
- Occipital Lobe - associated with visual processing
- Temporal Lobe - associated with perception and recognition of auditory stimuli, memory, and speech

The cerebral cortex is highly wrinkled. Essentially this makes the brain more efficient, because it can increase the surface area of the brain and the amount of neurons within it.

A deep furrow divides the cerebrum into two halves, known as the left and right hemispheres. The two hemispheres look mostly symmetrical yet it has been shown that each side functions slightly different than the other. Sometimes the right hemisphere is associated with creativity and the left hemisphere is associated with logic abilities. The corpus callosum is a bundle of axons which connects these two hemispheres.

Nerve cells make up the gray surface of the cerebrum which is a little thicker than your thumb. White nerve fibers underneath carry signals between the nerve cells and other parts of the brain and body.

The neocortex occupies the bulk of the cerebrum. This is a six-layered structure of the cerebral cortex which is only found in mammals. It is thought that the neocortex is a recently evolved structure, and is associated with "higher" information processing by more fully evolved animals (such as humans, primates, dolphins, etc).

The Cerebellum: The cerebellum, or "little brain", is similar to the cerebrum in that it has two hemispheres and has a highly folded surface or cortex. This structure is associated with regulation and coordination of movement, posture, and balance.

The cerebellum is assumed to be much older than the cerebrum, evolutionarily. In other words, animals which scientists assume to have evolved prior to humans, for example reptiles, do have developed cerebellums. However, reptiles do not have neocortex. The limbic system, often referred to as the
"emotional brain", is found buried within the cerebrum. Like the cerebellum, evolutionarily the structure is rather old.

This system contains the thalamus, hypothalamus, amygdala, and hippocampus. Here is a visual representation of this system, from a midsagittal view of the human brain:

![Figure 1.2 showing the cross-section of human brain](image)

Brain Stem: Underneath the limbic system is the brain stem. This structure is responsible for basic vital life functions such as breathing, heartbeat, and blood pressure.

1.14 FUNCTIONAL AREAS OF THE BRAIN

Human behavior comes from the human brain. It uses prior information found in separate texts on genetics, evaluation and development history, to further understand the current physical structure of the human neural system. The overall goal of this text, along with others in the series, is to provide bases in fact of the nature of man for use in developing education, administration, psychology, etc. The bases now used for these study areas are erroneous and the development of this study is now pure conjecture and imagination. The brain is confined to those features of the brain which determine or contribute to human behavior.
**Biological Function**

During the development of the human neural system, there are six areas of improvements in functions.

1. The direct reaction to a sensor signal. This earliest development of neural system was a simple but fast functional response to the stimulation of a sensor.

2. The instinctive response to an inherited pattern which is associated with danger or food. A sensor observes the environment and compares the received sensor pattern with an inherited pattern, where any difference in appearances signaled danger.

3. The development of sensory memory and comparison. The fixed danger or need pattern was largely replaced in the higher animals by sensor memory and comparison. Remembered sensor experienced all properly grated with descriptions of associated fear, hunger or lust are constantly compared with the sensor’s current view of the environment. This is an instinctive (intuitive, fixed process, neural signal reconciliation and conflict resolution, state function) process.

4. The ability to imagine, to mentally construct sensor patterns, remember them and then use them as if they were real in the value summation neural circuits, provides a creativity element in the instinctive value summation process.

5. Conscious thought, an awareness of identity, a feeling of personal management, is a relative newcomer and probably more developed in man than in other higher animals. It grew from the ability to imagine creating experiences in the sensor memories.

6. Then, quite recently, modern man discovered intelligent thought, a rigid methodology and mostly painful process. It required the learning and application of provable knowledge and a rejection of that which could not be proved. All of these neural processes are interwoven in the human mind in various portions. They are used simultaneously and the division between them is invisible to us. It is never really known which element prevailed in our decision.
Psychological Functions

Brain’s four psychological functions are thoughts, feelings, sensations and intuition. Thoughts and feelings don’t fit together because they are totally opposite, but thoughts and intuition do, so our thoughts could be completely developed and our intuition half developed if we being a psychological type based on rationalism. Our other two psychological functions however (feeling and sensations) are not working all in our human conscience. They belong to the wild anti-conscience, which has a functionalism totally independent of the human side of our conscience.

It means that we have to develop all psychological functions and transform the wild side of our brain into human, so that we may be able to use this part of our brain, which is not helping us in any way. On the contrary, it is only provoking problems and trying to destroy our human side in order to control our behavior.

Our intelligence will be completely developed only when all our psychological function will be working on our behalf, since they will have human characteristics. If we could use the other side of our brain, which is not controlled us right now, but works independently of our will and against our human side.

1.15 HEMISPHERICITY

Hemisphericity is the cerebral dominance of an individual in retaining and processing modes of information in his own style of learning and thinking. (Venkataraman 1989). Research conducted during the last two decades have shown that the human left cerebral hemisphere is to be specialized for primarily verbal, analytical, abstract, temporal and digital operations (Bogen 1969, Gazzaniga, 1970, Ornstein 1972). The same investigations revealed that the right cerebral hemisphere is to be specialized for primarily non-verbal holistic, concrete, creative, anagogic and aesthetic functions.

The specialized functions of each hemisphere appear well lateralized and established early in life (Kinsbourne, 1975) and barring special intervention or insult, continue essentially unaltered throughout the normal life span (Zelinski and
For identifying the hemisphere dominance, the ways in which and the levels at which the information is being processed by the individual are to be studied. Tools have been developed to study the “Style” of Learning and thinking and hence it would be possible to infer the dominance of an individual.

![Figure 1.3 Showing the Functions of different Brain dominance](image)

**1.16 LEARNING THEORY BASED ON HEMISPHERICITY**

The learning theory based on Hemisphericity structure and function can be actuated as long as the brain is not prohibited from fulfilling its normal learning processes. Hence activation of the Hemisphericity of the exceptional children, namely gifted children, slow learners, juvenile and youthful offenders etc can be altered by applying appropriate Hemisphericity activation technique. Indeed learning can be enhanced by challenge and inhibited by threat.

The Learning theory of Hemisphericity postulates that the brain processes information both as gestated way and in consensus manner simultaneously. In the brain the learning engages the whole physiology and hence it acts as a parallel processor to perform several activities at a time, like reading and writing; tasting and smelling etc.
Learning involves both conscious and unconscious processes and includes both focused attention and peripheral perception. Each brain is unique in remembering the functions. The search for meaning is Innate and hence it comes through patterning. Emotions are critical to patterning. We have two types of memory, the spatial and rote, we understand best when facts are embedded in natural, spatial memory.

Most people are somewhat flexible in their use of styles and they try with varying degrees to adopt themselves to the stylistic demands according to situation. This is because mind plays a flexible role in accomplishing variety of tasks. It is therefore important for the parents and the teachers to understand the nature of the student’s mind and its functions in different styles of learning and thinking.

Parents and Teachers are able to perceive the children and their natural tendencies of how they think, act and learn in different ways in different situations. For example, one child may welcome structure in learning while another may welcome new ways of doing things, and the rest may have fear for learning. One child may perform tasks in an orderly and systematic pattern and another may perform tasks in an unsystematic pattern.

This is due to individual differences in their style of learning and thinking. In the academic institutions teaching processes are mismatched. Teaching and thinking style of the teacher and learning and thinking style of the students differ because learning differences are not tied up to the understanding and thinking ability of the students. Many educators are still perplexed about the styles of students in learning and thinking process, what effect styles have on children’s performance in schools, and why attention should be given to children’s performance to assess their levels of ability.

“Styles depend upon cerebral dominance of an individual in retaining and processing different modes of information in his own style of learning and thinking”. Style indicates the Hemisphericity functions of the brain, and student’s learning strategy and information processing are based on the preferences of the
brain area. (Venkataraman 1990). Styles are propensities rather than abilities. They are the ways of directing the intellect which an individual finds comfortable. The style of learning and thinking are as important as levels of ability and we ignore to identify and develop students thinking styles at their earlier and appropriate stage.

It is foremost important for the teacher to focus their attention on students favored thinking styles before imparting the subject matter. If they fail to do so, the consequences may be serious, because the teachers may tend to confuse styles of students mind. Since the method of teaching adopted by teachers often reflects their personal thinking style, the students who have the same thinking style of the teachers are only benefited and rewarded. Otherwise the students whose styles are different do not correspond with the teacher’s styles are labeled as “Slow”, “Dull” or even “Stupid”. If mismatch exists between the preferred styles of the teacher and that of students, such students are frequently seen to be uninterested in the content, feel bored and reject the learning activity. Since any subject can be taught in any way that is compatible with any style, student will seek learning activities that are compatible with their own preferred styles. Both teachers and students tend to exploit their preferred styles, which may or may not match. Therefore, it is important for the teachers to know the student’s preferred styles, so that the teachers can capitalize the opportunities for student’s learning. (Venkataraman 1989)

Styles like abilities are no etched in stone at birth. They are in large part developed due to environment condition and by way of nurturing children by their parents and teachers. Some individual may have one preferred style at one stage and another preferred style at some other stage. Styles are not fixed, but changeable. We need to recognize the preferred styles of students and ourselves.

The efforts to understand learning and thinking styles and to learn to use them flexibly require the identification of an individual’s preferred style of learning and thinking. Research tools are readily available to identify the individuals preferred style of learning and teachers must eventually come forward to understand and identify the styles of learning and thinking in students. This
direct approach with the help of research tool will help to understand and assess the styles of students for developing intelligence and creativity in the fields of their preferred styles in academic areas. Thus the ‘Solat Tool’ is very important to assess the preferred styles of students learning and thinking (Venkataraman 1990).

1.16.1 RIGHT HEMISPHERE

The language area of the right hemisphere is capable of processing language if the discrimination is uncomplicated (e.g. a positive from a negative statement). It is nonverbal in nature with limited language processing ability, and it is creative in language.

The right hemisphere deals with the tonal memory, tonal qualities and tonal pattern. The interpretation and retention of complex visual patterns, such as geometric designs and graphs, model building and recognition of faces are the important functions activated by right hemisphere. The right hemisphere functions for left side of the body. The functions of right hemisphere have generally been described as creative, divergent, productive, deductive, intuitive, holistic, gestalten, concrete and analogic. The right hemisphere functions in such a way that it is capable of dealing with the most difficult logical and systematic problems and finding solutions.

It deals with the functioning of iconic presentation of information such as graphic displays, diagrams, flowcharts and greatly facilitates both the comprehension and the retention of information. The right hemisphere helps to design thought experiments which left hemisphere simply could not. The right hemisphere deals with body image and controls emotional aspects. This part of the brain is passive and its mysterious nature of functioning is well activated for aesthetic functions.

1.16.2 LEFT HEMISPHERE

Expression of language through speech, verbal memory, word parts, syllable recognition, analysis of speech sounds, use of verbs and verbal aspect of writing are the functions predominantly done by left hemisphere.
The left hemisphere is considered to be a rational linear mind specializing processing, logical, analytical thinking, inductive and convergent in production of ideas. Mathematical reasoning, particularly calculations and algebraic, abstract maths, digital operations and computations are activated by left hemisphere.

Assessment of relations, ability to analyse the common aspects of task and relationship among tasks, linguistic task, retention of language and comprehension, learning the 3 R’s and acquisition of new habit patterns are the functions of left hemisphere. The left hemisphere functions for activating aggressive behavior of a man and maintaining masculine nature.

1.16.3 INTEGRATED BRAIN HEMISPHERICITY

Most individuals have no distinct preference for any one style of thinking. They equally adapt both the hemispheres. In the integrated brain, the functions of one hemisphere are immediately available to the other, producing a more balanced use of language. Integrated Brain emphasizes active learning, in which the learner makes connections that tap both hemispheres. Integrated Brain Hemisphericity manages the emotional climate, to reduce the “downshifting” or primal thinking that occurs during distress. Learning can be enhanced with music and soothing colors.In this Hemisphericity, imaging is seen as the basis for comprehension. For this reason, learners are encouraged to visualize, draw, and use drama as they develop new ideas, in order to retain them. They are better able to manage their emotional makeup and have good social skills. This Hemisphericity is more effective in articulating goals and reaching them, which is the key to success in any field.

1.16.4 STYLE OF LEARNING AND THINKING - HEMISPHERICITY

The differences in preference of the two hemispheres for information processing have been referred to as styles of learning and thinking (SOLAT) by Torrance (1977).

**Right Hemisphere:** Normal people with right hemisphere dominance will exhibit their styles more closely associated with right cerebral hemisphere functions.
**Left Hemisphere:** Generally people with left hemisphere dominance will exhibit their styles more closely associated with left cerebral hemisphere functions.

**Integrated Hemisphere:** Persons with integrated brain dominance will exhibit their styles showing primarily cerebral complementarily in information processing.

Torrance, etal (1980) Venkataraman (1989) and others have developed the SOLAT tool based on the Hemisphericity functions of the brain. It identifies Hemisphericity dominance by way of studying the hemisphere functions. It indicates an individual’s learning and thinking strategy and brain hemisphere preferences in problem-solving.

Much has been written during the past decades on styles of learning and thinking, yet many Educators, Administrators, of various sectors are still perplexed about which styles are and what effect have on individual performance in various fields and why individual styles should be accorded as much attention as their levels of ability.

Educator and Administrators are not to be blamed for their perplexity, because the term “Style” has been used in different ways to mean many different things, styles of learning and thinking are every bit as important as levels of ability and we ignore individual’s thinking styles. Most people are at least somewhat flexible in their use of styles and adopt themselves to the stylistic demands according to the situations and try with varying degrees for success and problem solving. The flexible use of mind for activities of mental self-Government accounts for a variety of thinking styles in accomplished desired goals / task.

**1.16.5 CHARACTERISTICS OF THINKING STYLE**

People must organize the work and the way to do by applying Mental Function, Mental Form and Decision Making Style. The preferences may vary with the task and situation. Some characterization appears to equate some of the aspect of their personality as listed below.
### Table 1.1 Characteristics of Thinking Style

<table>
<thead>
<tr>
<th>Categories</th>
<th>Styles</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mental Functions</strong></td>
<td>Legislative</td>
<td>They like to do things following their own ways and especially prefer the creative or innovative planning based activities</td>
</tr>
<tr>
<td></td>
<td>Executive</td>
<td>They like to do things following the unambiguous rules and prefer to solve pre-structured problems. They are typical implementer.</td>
</tr>
<tr>
<td></td>
<td>Judicial</td>
<td>They like to evaluate rules and procedures and prefer such problems in which existing ideas can be analyzed and evaluated.</td>
</tr>
<tr>
<td><strong>Mental Forms</strong></td>
<td>Monarchic</td>
<td>They are single-minded and don’t like be interrupted while in solving a problem. They will not have great interests in what is not related to the thing that they like to do.</td>
</tr>
<tr>
<td></td>
<td>Hierarchic</td>
<td>They tend to set priorities of goals under consideration of the need. They recognize the need to view or solve problems from a number of aspects.</td>
</tr>
<tr>
<td></td>
<td>Oligarchic</td>
<td>They like to do more than one thing within the same time. But they of equal perceived tend to be motivated by several competing goals importance.</td>
</tr>
<tr>
<td></td>
<td>Anarchic</td>
<td>They have difficulties in sorting out a potpourri of goals and needs. Their approach to solve problems seems random and not organized.</td>
</tr>
<tr>
<td><strong>Decision Making Style</strong></td>
<td>Logical</td>
<td>They are concerned with sequential thinking. They like to be objective. They perceive things by ts parts. Their thinking style is rationale and analytical in nature.</td>
</tr>
<tr>
<td></td>
<td>Creative</td>
<td>They perceive things as a whole. They prefer to be subjective. They are initiative and synthesizing in nature.</td>
</tr>
</tbody>
</table>
1.17 MENTAL FUNCTIONS

Mental Function is a term often used interchangeably for all the things that individuals can do with their minds. These include perception, memory, thinking (such as ideation, imagination, belief, reasoning, etc.), volition, and emotion. Sometimes the term cognitive function is used instead.

A specific instance of engaging in a cognitive process is a mental event. The event of perceiving something is, of course, different from the entire process, or capacity of one's ability to perceive things. In other words, an instance of perceiving is different from the ability that makes those instances possible.

It is a remarkable and puzzling fact that, for over a century, psychological and biological research has been exploring the development and functional characterization of brain/mind activity in almost totally separate and non-interactive ways. It cannot be denied, however, that the human brain is the result of evolution in the brains of other mammals. The sub-cortical structures of mammals’ present anatomical, neuro-chemical and functional homologies, and these suggest largely similar mechanisms for emotion, perception and action. One of the reasons for the lack of concern by experimental psychologists with biological issues may derive from a premature, and thus largely sterile, nature-nurture controversy. While it was difficult in the recent past to understand how genes might interact with the environment in expressing themselves, the notion of epigenetic development is now better understood in its precise mechanisms, although much remains to be discovered. The nature-nurture controversy, however, has overshadowed other important points. Even if it is recognized that human behavior largely results from individual and socio-historical interaction with the environment, such interactions can hardly be understood if the general constraints that the species confronts, given its bodily structure, general needs, and physical-social environment, fail to be grasped.

In order to approach the notion of a psychological (or mental) function in a principled manner, we need to understand, in general terms, what a mental function is, and how it relates to brain evolution. To achieve this, we will first
need to summarize how teleological discourse has been naturalized, i.e. how functional explanation has been defined in purely causal terms. We will also need to characterize how mental functions differ from other organic functions, and consider the causal constraints that are exerted over evolutionary time on this type of function. In order to discuss this issue, however, we will first have to examine the respective roles of genes and development in regulating adult cognition, and determine the correct methodology to use in addressing the question of mental function. Various definitions of mental function correspond to different methodological viewpoints are Evolutionary Psychology and its modular approach to function, and the idea of a developmental view of function, and neuro-cognitive theories, with their notion that neural growth determines function. The goal of this paper is to define the concept of a “mental function” that meets the general constraints that apply to the concept of a biological function. Its ultimate aims are to understand how psychology as a theoretical field is articulated with biology, and identify which methodological requirements are entailed by this articulation.

Like government carry out legislative, executive and judicial functions, our mind also functions in the same pattern. The legislative functions of the mind are concerned with creating, formulating and planning. The executive functions of the mind are concerned with implementing, adopting, exercising and doing things in an orderly pattern. The judicial functions of the mind are concerned with evaluating, comparing, contrasting and judging.

Thus our mind performs all the three styles of functions. However, in some persons any one of the styles tends to be dominant and this makes the individuals to exhibit their talent in the particular style of dominance.

1.17.1 EXECUTIVE STYLE OF MENTAL FUNCTIONS

Executive function is the asset of mental skills that help us get things done. These skills are controlled by an area of the brain called the frontal lobe. Executive Function is like the CEO of the brain. It is in-charge of making sure things get done from the planning stages of the job to the final deadline.
Executive Function isn’t working as it should, one’s behavior is less controlled. This can affect ability to:

- Work
- Do things independently
- Maintain relationship

Individuals or managers who is authoritative in nature dealing with different departments or sections by way of exercising their power in a streamlined fashion; ability of recalling facts and numerical figures; interested in writing fiction and non-fiction; getting clarity while learning experimentally and through logical reasoning; holistic and fractional approach in analysis, thinks before taking any decisions, strong determination and ambition are the examples of executive style of activities.

Pursuits of this type appeal to people who like to follow rules & regulations, guidelines, adjusting himself according to the prevailing conditions, mentally receptive and responsive what they hear and read. Integrated Hemisphere dominants respond well to such activities of Executive Style.

### 1.17.2 LEGISLATIVE STYLE OF MENTAL FUNCTIONS

Legislative people like to come up with their own ways of doing things and prefer to decide for themselves what they will do and how they will do it. Legislative people like to create their own rules and prefer problems that are not prestructured or prefabricated.

Identifying the major threshold areas in an organization for developments, maintaining ability and efficiency of writing assignments about thought experiments, imagining different endings or causes in important decisions, designing independent projects and experiments for developments are the examples of legislative style of activities. Such endeavors appeal to people who like to create rules or structures and who enjoy dealing and solving problems.
other words people in whose right hemisphere functions respond well to such activities of legislative style.

1.17.3 JUDICIAL STYLE OF MENTAL FUNCTIONS

An individual with a Judicial Style focuses on evaluating the products of other’s activities. The person with Judiciary style is particularly critic in nature. Ability of comparing and contrasting, skill of analyzing, judging, assessing of the workers or subordinates and their tendency, reasoning as to how are set of event led to another, evaluating the courses of incidents, logical approach in judgments, intellectuality are the examples of judicial activities. Individuals who like to evaluate facts, like to write critiques, give opinions and to judge things will respond well to the judicial style of functions. In other words people with left hemisphere functions will respond well to such activities.

1.18 MENTAL FORMS OF THE BRAIN

Just like the function of various branches of government, mental self-government resembles the form of government and functions in the form of monarchic, hierarchic, oligarchic and anarchic styles. The forms of mental self-government and their styles are indispensable to carryout different duties in an organization whether the organization is industrially oriented, non-industrially oriented or government organization. Each organization prefers persons’ possessing specific styles, function in specific jobs in accordance with their laid down forms and procedures for successful functioning of the organization. If any mis-match in styles of function exist between the individuals and the management, the organization will not function well, will not flourish and further development activities will come down.

1.18.1 MONARCHIC MENTAL FORM

In the monarchic form, a single goal or way of doing things predominates. Attention is focused on target and practical operations undertaken are single minded in completing the fixed goal. Individuals with the monarchic style put forth their power and energy single mindedly in completion of the fixed task
without any deviation. They are oblivious to obstacles that stand in their way or able to cast them aside. The monarchic form oriented individuals will be authoritarian and rigid in nature. Such persons will be quite successful in extracting work from their subordinates and command their subordinates in carrying out jobs given to them.

1.18.2 HIERARCHIC MENTAL FORM

In the hierarchic form, mental set up allows individuals to function and achieve multiple goals, each of which may have different types of priority. For example an organization allocates time to several types of work in varying priorities taking into account the importance of each and every job without perturbation i.e. very urgent, important, immediate, ordinary etc. In general, people who have hierarchic form of mental set up tend to enjoy dealing with multiple goals one by one but not all at a time.

1.18.3 OLIGARCHIC MENTAL FORM

The oligarchic form mental set up allows individuals to function and achieve multiple goals; but to them all matters are equally important. Individuals who have oligarchic mental form of thinking style will function well in a judicial side and also in Administrative side. They will be convergent in thinking and they will give importance to the various points equally from the rudimentary points. In fact oligarchic individuals relish dealing with multiple and often competing goals of equally perceived importance. But they will experience conflict and tension when they have to assign priorities to various tasks.

1.18.4 ANARCHIC MENTAL FORM

Individuals who have anarchic form of thinking styles, the rules, procedures and guidelines are anathema. Individuals who have anarchic form of thinking styles tend to perform best when tasks and time are unstructured. Though there are no clear procedures to be followed, when the problems they confront are to be solved immediately through insights, there may be a departure from the existing procedures. People who have an anarchic style generally enjoy dealing
with a potpourri of needs and goals that are often difficult to sort out. They usually take a random approach to problem solving, often seem intolerant, unaware of the need for rules and regulations and tend to resist the authority.

1.19 DECISION MAKING STYLES

Decision making is the study of identifying and choosing alternatives based on the values and preferences of the decision maker. Making a decision implies that there are alternative choices to be considered and in such a case, we want not only to identify as many of these alternatives as possible but to choose the one that has the highest probability of success or effectiveness and best fits with our goals, desires, lifestyle, values and so on.

Decision making is the process of sufficiently reducing uncertainty and doubt about alternatives to allow a reasonable choice to be made from among them. This definition stresses the information gathering function of decision making. It should be noted here that uncertainty is reduced rather than eliminated. Very few decisions are made with absolute certainty because complete knowledge about all the alternatives is seldom possible. Thus, every decision involves a certain amount of risk.

Decision making can be regarded as an outcome of mental processes (cognitive process) leading to the selection of a course of action among several alternatives. Every decision making process produces a final choice. The output can be an action or an opinion of choice.

Human performance in decision making terms has been the subject of active research from several perspectives. From a psychological perspective, it is necessary to examine individual decisions in the context of a set of needs, preferences an individual has and values they seek. From a cognitive perspective, the decision making process must be regarded as a continuous process integrated in the interaction with the environment. From a normative perspective, the analysis of individual decision is concerned with the logic of decision making and rationality and the invariant choice it leads to.
Yet, at another level, it might be regarded as a problem solving activity which is terminated when a satisfactory solution is found. Therefore, decision making is a reasoning or emotional process which can be rational or irrational, can be based on explicit assumptions or tacit assumptions.

1.19.1 LOGICAL DECISION MAKING STYLE

Logical decision making style is an important part of all science based professions, where specialists apply their knowledge in a given area to making informed decisions. Logical thinking style is the use of the mind in an effective, intelligent, and creative way while constantly and consistently applying reasoning. Logical thinking requires observing the facts of the situation, organizing the observations to study the facts, and applying a technique to analyze the facts. One must understand the problem that one is facing before taking any action. Logical thinking also requires looking at the situation from every angle and figuring and clarifying what needs to be done. Logical thinking is about identifying every issue related to the problem and creating ideas to remedy the situation. Individuals who think logically usually like crossword puzzles, brain games, chess, and want to understand what they are reading and not just memorize the words. Logical thinking is used for many things, and one in particular is mathematics. Mathematics requires logical thinking to solve a problem. For example to understand fractions an individual would first have to understand division. Logical thinking is a style of thinking much like critical thinking in that they both use facts to find the truth or answer. Logical thinking consists of two major elements, deductive reasoning, and inductive reasoning (Kirby & Goodpaster, 2007). Logical follows a structured path and can be used in the academics. Once an individual learns the logical thinking style, many individuals will typically hold professional positions. A constant life of being challenged is what the logical thinking style is all about.

1.19.2 CREATIVE DECISION MAKING STYLE

Creative thinking style is totally different from logical thinking style. Creative thinking comes from the right side of the brain (Harris, 1998). To think creatively, individuals have to think outside of the box. Many people who think
creatively will find solutions not within the traditional form. Creative thinking can be done by everyone but seems to be suppressed in adults unless nurtured and used. Creative thinking can also be applied to most situations. Creative thinking is used within an informal setting whereas, critical thinking is used in a more educational or formal setting (Harris, 1998). When one thinks creatively he or she will want to explore new ideas, generate possibilities, and look for the right combination of answers; not just the one that makes sense in a formal setting. It is the possibility of the different results and ideas that is important when thinking creatively. Creative thinking is a skill that allows individuals to work through problems and find solutions that others may not come up with. If one does not believe that he or she can think creatively then they will have trouble with the process of creative thinking. Creative thinking is all about the experience of figuring out a problem by looking at all sides of the situation and turning it into what you want or can. The best ideas in life have come from individuals who were thinking creatively. Most people only use creative thinking after they are out of college because of the informal nature of the thinking process (Harris, 1998). Creative thinking is different from all other types of thinking because of the way an individual uses it. Most often it is applied in an informal setting.

A way of looking at problems or situations from a fresh perspective that suggests unorthodox solutions (which may look unsettling at first). Creative thinking and making decision can be stimulated both by an unstructured process such as brainstorming, and by a structured process such as lateral thinking.
**Figure 1.5 Showing the Paragenic representation of Mental Functions, Mental Forms and Decision Making Styles related to Brain Hemisphericity by the investigator**

**1.20 CONCLUSION**

The part – B of the first chapter enlightens about the perspectives of the study. This unit is encircling the theoretical concepts of the study, Mental Functions, Mental Forms and Decision Making Styles and its influence related to Brain Hemisphericity of the Academic Administrators.