

## **CHAPTER- I**

### **INTRODUCTION**

Fingerprint offer a reliable means of personal identification. That is the essential explanation for fingerprint having replaced other methods establishing the identities of persons reluctant to admit previous arrest

DMIT is an abbreviation of Dermatoglyphics Multiple Intelligence Test. Dermatoglyphics is the study of fingerprint patterns, palm and toes. Dermatoglyphics was mainly used to find skilled sportsmen for Olympics Games in 1970s. Dermatoglyphics is invented by Dr. Harold Cummins. Dr. Harold Cummins is certainly acknowledged as Father of Dermatoglyphics. The word dermatoglyphics originates from two ancient Greek words Derma and glyph which means skin and carving respectively. The term was coined by Dr. Harold Cummins, the father of American fingerprint analysis, even though the process of fingerprint identification had already been used for several hundred years. Multiple intelligence is a scientific method of understanding brain lobes and its usages. The theory of multiple intelligence is a means to accurately define the Intelligence in humans based on proportion of different abilities, rather than seeing intelligence as dominated by a single general ability.

This pattern develops when fetus brain development starts in the mother's womb at thirteenth to nineteenth week. Striae generally refer to stripes in the body. Our fingers and feet have the most stripes (lines). And the body lines up to hit the place are finger and feet. Striae formation began at 19 weeks during pregnancy, when the brain and spinal cord began development separately. At this time, number of creases will gradually begin to form in the brain, and creases will be reflected on the fingerprints. The different regions of our brain are reflected by our fingerprints. And dermatoglyphics is DNA reflected in the appearance of the body. It is unique and it will not change. Since each person's fingerprint are unique, we can understand one's innate potential, personality, and preferences by analyzing dermatoglyphics.

DMIT helps in understanding a great individual potential and the personality type. This is further based on the understating from Neuroscience, Genetics, Dermatoglyphics, Psychology, and

Embryology. Through nearly five centuries of observation and study of genetic medicine, amount and distribution of neurons is reflected in a regular pattern on our fingerprints. According to European and American experts, they found that fingerprint shows different kinds of characteristics, even with monozygotic twins, their fingerprints are different. At the same time fingerprints will appear again after healing of wounds, as long as the injury has not affected the cell. Medical experts, with observation, recording, comparison, induction and other methods and clinical experiences, confirmed that fingerprints provide accurate analysis of a person's multiple intelligence and potential. Experts who study dermatoglyphics believe that fingerprints were marks of embryonic nerves, which may reflect one's genetic potential. If we understand our own qualities and nurture according, it will tremendously help in terms of career development, managing emotions, increases concentration, and improve interpersonal skills. It tells us about one's style of learning and thinking.

The first time when skin stripes were recorded and documented was in 1823 by Czech doctor Pa Jinjie. At that time, he had taken note that the palm is covered by a surface of layer of wrinkles, which is made up specific lines. Each fingerprint is unique; fingerprints on the right hand will not be the same on the left hand. While fingerprint will increase in size, it will not change as long as one is not seriously injured. When there is no damage to the dermis, fingerprints will begin to show again along with healing of wound.

Dermatoglyphics was first applied in the pathological studies, later to be extended to study nymphomania and violent crimes in the FBI. Dermatoglyphics is complex. Each finger represents different interpretations. One's potential can be generally identified based on the shape of fingerprints. For more accurate results, the number of stripes (quantization) and angle (the angle between the a-triradius) (under the index finger, the axial triradius (near the wrist), and the d-triradius (under the pinky finger) need to be measured. Each quantization represents one million genes; the more the quantization, the higher the ability. The smaller the angle, the higher the sensitivity for learning. Although dermatoglyphics may identify a person's potential, one may not reach his or her full potential without training. If your fingerprints identify that one has potential in art, but lack of training of discipline, one's potential would possible be hidden.

## CHAPTER-II

### LITERATURE REVIEW

#### 2.1 Dermatoglyphic fluctuating asymmetry and atypical handedness in schizophrenia :

Atypical handedness and dermatoglyphic abnormalities are hypothesized to reflect a neurodevelopmental disturbance in schizophrenia. Developmental instability, indexed by dermatoglyphic fluctuating asymmetry (FA), reflects the degree to which an individual's ontogenetic program is maintained and provides a useful framework in which to consider atypical handedness in schizophrenia. Thirty patients diagnosed with schizophrenia were compared with 37 matched healthy controls on levels of dermatoglyphic FA, a demonstration task determining hand preference and a test of relative hand skill. Multivariate analyses established that patients demonstrated greater FA and more atypical hand skill compared with controls. In patients, but not in controls, there was a strong positive association between a measure of FA and a measure of atypical hand skill, suggesting that these markers of neurodevelopmental disturbance are related in schizophrenia. On a measure of hand preference, patients were more likely than controls to be classified as mixed handed than either right or left handed. Results from the present study support the conjecture of greater developmental instability in schizophrenia affecting neurodevelopmental processes, including those conferring manual dominance.

#### 2.2 Dermatoglyphic a-b ridge count as a possible marker for developmental disturbance in schizophrenia: replication in two samples:

The aim of this study was to conduct an epidemiological analysis of quantitative dermatoglyphic traits as a marker of prenatal disturbance during the second trimester of life in schizophrenic patients. TFRC (Total Finger Ridge Count) and TABRC (Total a-b Ridge Count) were studied in a sample of 38 schizophrenic patients and 69 healthy individuals. A significant decrease of the a-b ridge count was found in patients compared to controls, with a significant linear trend across the population distribution (OR linear trend = 1.6; 95% CI = 1.0–2.4), indicating that the effect was not confined to a subgroup of cases with values in the lowest range.

This finding was replicated in a second, larger sample (OR linear trend = 1.3; 95% CI = 1.0–1.8). The suggestion that a-b ridge count is associated with genetic risk for schizophrenia needs to be investigated further. TFRC did not distinguish between patients and controls. The a-b ridge count may be a continuous risk factor for later schizophrenia, pointing towards a disturbance occurring during the second trimester of prenatal life, a period of critical CNS growth.

2.3 Dermatoglyphics and Syndromes: There are a number of dermatoglyphic patterns that occur more frequently in certain syndromes than in the general population. The relative frequencies of various dermatoglyphic features have been reviewed for nine chromosomal disorders, three single-gene defects, three syndromes of unknown cause, and one caused by an environmental teratogen. The data are presented in a form that may aid the clinician in arriving at a diagnosis.

2.4 Dermatoglyphics in Down's syndrome: Dermatoglyphic data were obtained from 235 cytogenetically confirmed patients of Down's syndrome. The data were correlated and compared with 230 controls. Printing and transparent adhesive tape photography methods were used to get the dermatoglyphic prints. Patients' total finger ridge counts and 'atd' angles differed significantly from that of the controls. Mostly ulnar loop pattern was observed in the patients. Abnormal dermatoglyphic features such as, simian crease, Sydney line and patterns in the hyposthenia and interdigital areas have occurred more frequently in the patients. Dermatoglyphics and the analyses carried out have proved that they are invaluable in their clinical value, in selecting patients of Down's syndrome for cytogenetic analysis.

2.5 Dermatoglyphics in the Rubella Syndrome: Epidermal ridges on hands and feet (dermatoglyphics) develop during the first trimester of gestation and remain unchanged thereafter for life. As the rubella virus has a teratogenic effect during this period, it is postulated that an alteration in dermatoglyphics might be present in rubella-damaged individuals. Analysis of dermatoglyphics in 28 rubella-damaged individuals revealed a higher frequency of whorl patterns, a reduced a-b ridge count, a wider atd angle, a

tendency towards more patterns on the palm, and a higher frequency of transitional and simian lines than in normals. This study suggests that dermatoglyphics may serve as a marker of a deleterious intrauterine experience during early gestation.

2.6 Anthropological dermatoglyphics: Research in dermatoglyphics having direct interest and application to anthropology has continued to grow since the turn of the century. Anthropological dermatoglyphics can offer important perspectives in viewing the nature and significance of human variation. Several forefronts of ongoing research are reviewed. First, methodology continues to improve definition and classification of variables. A second line of inquiry deals with hereditary aspects. Inheritance models, both monogenic and polygenic, have been proposed. Single locus systems seem to have limited application, as in the transmission of triradial excess or deficiency illustrated by the missing *c* triradius. Polygenic inheritance has been demonstrated in quantitative phenotypic expressions exemplified by the total finger ridge-count. Exciting recent research employing the “field concept” has discovered a small number of developmental factors which correspond well with earlier findings on volar pad development and dermatoglyphic features. Maternal and other environmental effects have been shown to operate on dermatoglyphic expression. Human population studies using dermatoglyphics began with early racial descriptions and currently utilize multivariate procedures for detecting evolutionary processes. Congruence testing between dermatoglyphics and other biological distance measures is also an active endeavor. In this connection, dermatoglyphic variable selection has become important in recognizing that different variables might well be useful in micro- and macroevolutionary situations. Finally, dermatoglyphic analysis has been applied to primate studies. Although this area has not kept pace with human studies, primate work has been crucial for the important matters of taxonomic assessment and functional dermatoglyphics.

2.7 The dermatoglyphics of American Caucasians: Digital and palmar dermatoglyphics were collected from 360 male and 360 female seven year old Caucasians from the greater Boston area. All participants were screened and found to be free of minor anomalies or chronic diseases. All individuals with I.Q. scores below 70 were also

excluded. The results were presented in such a way as to give information on bilateral symmetry as well as overall frequencies of the various dermatoglyphic features. The results were compared with those of the corresponding sample of seven year old normal male and female Negroes of the accompanying report. A review of the distribution of the dermatoglyphic features in different Caucasian populations has also been presented and the overall dermatoglyphics of the Caucasians were discussed in reference to the distribution of the same features in the other major "racial" groups. The method of collection and selection of the subjects, described in the text, makes this set of data unique and one of the most suitable for use as controls in studying the dermatoglyphics of the individuals with diseases or congenital anomalies.

#### 2.8 Congenital dermatoglyphic malformations in severe bipolar disorder :

Dermatoglyphic alterations may be the result of early prenatal disturbances thought to be implicated in the aetiology of psychiatric illness. In order to test this hypothesis in the particular case of bipolar disorder, we assessed two congenital dermatoglyphic malformations (ridge dissociation (RD) and abnormal features (AF)) and two metric dermatoglyphic traits (total finger ridge count (TFRC) and total a-b ridge count (TABRC)) in a sample of 118 patients with chronic DSM-III-R bipolar illness, and 216 healthy controls. Bipolar cases showed a significant excess of RD and AF (OR=2.80; 95% CI: 2.31–3.38) when compared with controls. In the cases, the presence of anomalies was associated with earlier age of onset. No differences were found for TFRC and TABRC. No associations were found with sex or familial morbid risk of psychiatric disorders. Our findings add further weight to the suggestion that early developmental disruption is a risk factor for later bipolar disorder.

#### 2.9 Dermatoglyphic peculiarities in children with oral clefts :

In humans, the development of the primary palate and the lip is completed by the 7th week of intra uterine life and that of secondary palate by 12th week. The dermal ridges develop in relation to the volar pads, which are formed by the 6th week of gestation and reach maximum size between 12th and 13th weeks. This means that the genetic message contained in the genome - normal or abnormal is deciphered during this period and is also reflected by

dermatoglyphics. Hence this study was done in order to observe the differences in dermatoglyphic patterns between the children with oral clefts and normal children and to determine the usefulness of dermatoglyphics in studying the genetic etiology of oral clefts. Dermatoglyphic data from 50 oral cleft children and 50 normal children were collected using the ink method and comparison was done between them. In the present study, we found an increase in the ulnar loop patterns on the distal phalanges of the ten fingers, an increase in the atd angle and an increase in the fluctuating asymmetry of the atd angle in the oral cleft children which indicates the degree of developmental instability of the oral cleft individual.

2.10 Palmar dermatoglyphics in carcinoma breast of Indian women : The present study was planned to assess the relationship of palmar dermatoglyphic patterns of hands in women with breast cancer and or at risk for developing breast cancer. This study was conducted on 100 histopathologically confirmed breast cancer patients in women and their digital dermatoglyphic patterns were studied to assess their association with the type and onset of breast cancer. Simultaneously 100 age-matched controls were also selected with no self or familial history of a diagnosed breast cancer and the observations were recorded. The differences of qualitative (dermatoglyphic patterns) data were tested for their significance using the chi-square test, and Student's t-test was used for quantitative (ridge counts and pattern intensity index) data analysis. The results of the study indicated statistically significant changes in finger ridge count and fingertip pattern in cases of carcinoma breast as compared to the control group. Palmar dermatoglyphics is simple, inexpensive, anatomical and non-invasive and may be used as a reliable indicator for screening of high-risk population in developing country like India, for early detection and early therapy, thus reducing the morbidity and mortality in cases of carcinoma breast.

## **CHAPTER-III**

### **AIM AND OBJECTIVE**

#### **AIM**

This research aimed to assess the report generated from the dermatoglyphics multiple intelligence test (DMIT) administered by recognized DMIT recourse company to analyze the multiple intelligence of a person from the fingerprint of that person.

#### **OBJECTIVE**

1. To analyze the intrinsic talents of a person from fingerprints.
2. To find the salient features of the DMIT.
3. To determine the respondent's perception as regard its benefit with the end view.



## **CHAPTER - IV**

### **MATERIALS AND METHODOLOGY**

#### **MATERIALS REQUIRED**

1. Scanner
2. DMIT Software
3. Computer
4. Fingerprint

#### **METHOD**

The finger print of the person is scanned using the scanner that is connected to the computer in which the DMIT software is installed. The software will convert the fingerprints to digital image and analyze the image. The image will be compared to the standard and the report will be generated.

Step one: Finger Capturing

Step two: Finger print verification

Step three: Scientific finger print analysis

Step four: Report generation


Step five: Report briefing by professional dermatoglyphics counselor

## CHAPTER – V

### OBSERVATION

#### Left / Right Brain Bias

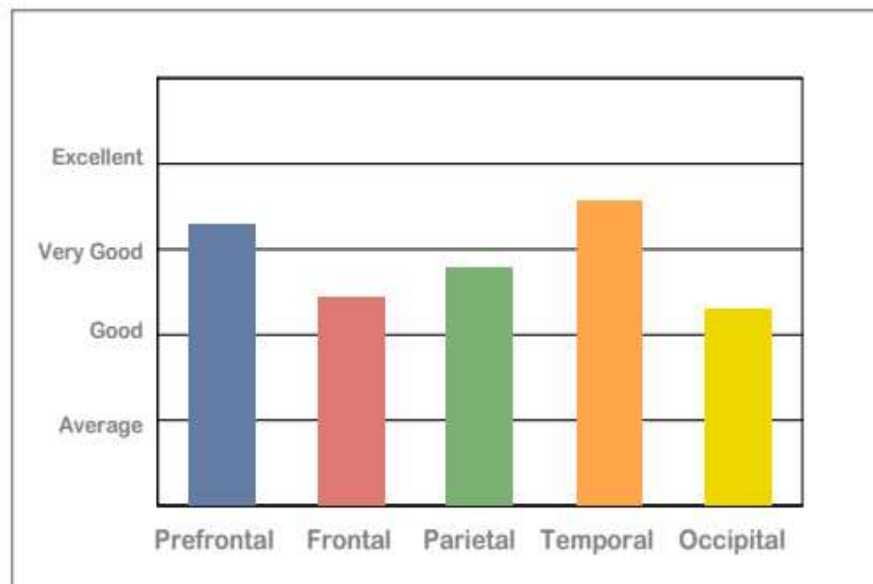
Brain Bias reading for : Sample A

<p><b><u>Left Brain Bias</u></b></p> <p>55 %</p>	<p>left right</p>  <p>what do you think with?</p>	<p><b><u>Right Brain Bias</u></b></p> <p>45 %</p>	
<p><b>Characteristics</b></p>		<p><b>Characteristics</b></p>	
<p>Logical, Sequential, Rationale, Highly analytical, Objective, Factual, Looks at parts, words and language, Can comprehend, Form practical strategies</p>		<p>Random, Intuitive, Holistic, Synthesizes, Subjective, Emotional, Looks at wholes, symbols and images, Can get meaning and present possibilities</p>	
<p><b>Advantages</b></p>		<p><b>Advantages</b></p>	
<p>Logical, Rational, Specific, High executive ability</p>		<p>Creative, Full of ideas, Easy to understand due to openness in expressing of feelings</p>	
<p><b>Disadvantages</b></p>		<p><b>Disadvantages</b></p>	
<p>Inflexible, stubborn and resistant to other's ideas and opinions</p>		<p>Impractical, Emotional, leading to impulsive decisions</p>	

## Comparative Strengths of 5 Lobes

- 1) The Prefrontal Lobe controls Mental Ability.  
The anterior (front) portion of the frontal lobe is called the Prefrontal Cortex.
- 2) The Frontal Lobe handles Thinking and Imagination is located at the front of the brain
- 3) The Parietal Lobe controls Kinesthetic Ability and is located in the middle section of the brain
- 4) The Temporal Lobe controls Auditory Perception is located on the bottom section of the brain .
- 5) The Occipital Lobe controls Visual Perception and is located at the back portion of the brain

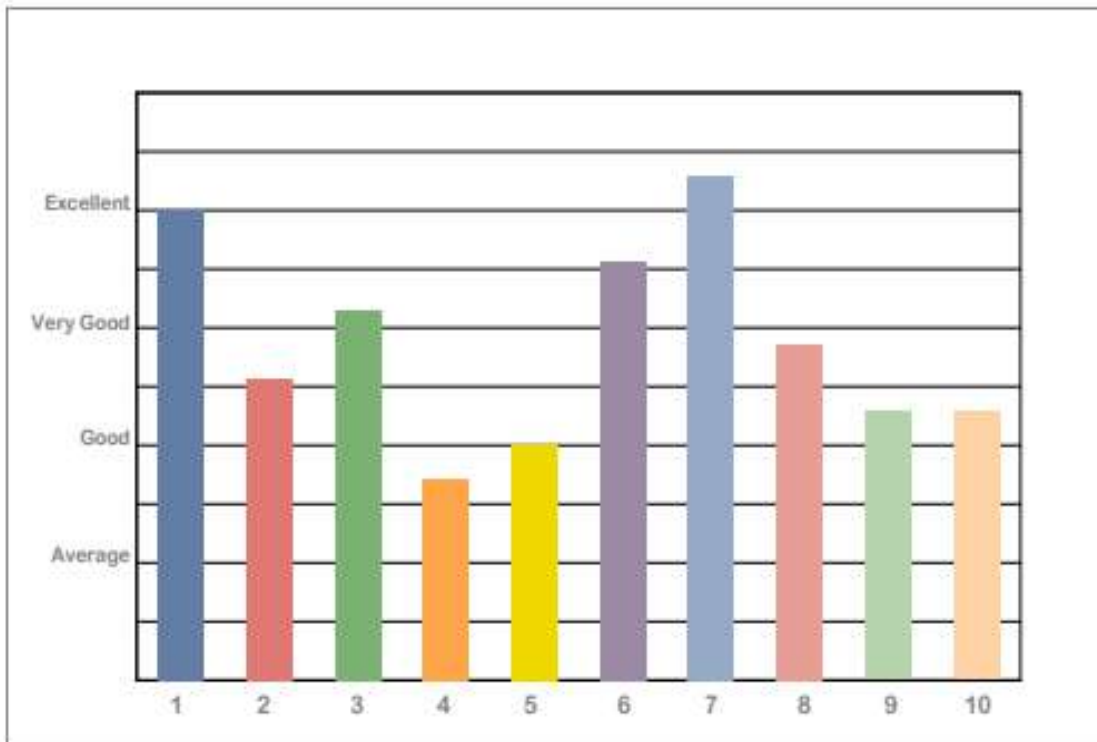
### Comparative Brain Lobe strengths for : Sample A



## Split Lobe Readings

### Split Lobe readings for : Sample A

1	Left Prefrontal	Rational Thinking, Planning, Coordinating, Controlling, Executing Behavior, Self Achievement Motive, Communication
2	Right Prefrontal	Leadership, Interpersonal, Creativity, Goal Visualization, Determination, Self Esteem, Intuition
3	Left Frontal	Logical Reasoning, Computation Process, Analysis, Conceptual Understanding, Numeric, Grammar and Linguistic
4	Right Frontal	Imagination, Idea formation, Visualization, 3D, Visual Spatial Ability
5	Left Parietal	Fine Motor Skills, Action Identification, Control of Body Movements
6	Right Parietal	Gross Motor Skills, Body Movement and Sense
7	Left Temporal	Language Ability, Language Understanding, Audio Identification, Memory Ability
8	Right Temporal	Music , Emotions, Feelings
9	Left Occipital	Visual Identification, Interpretation, Reading, Observation
10	Right Occipital	Visualization, Visual Appreciation, Art, Aesthetic Sense



## Inborn Intelligence Potential

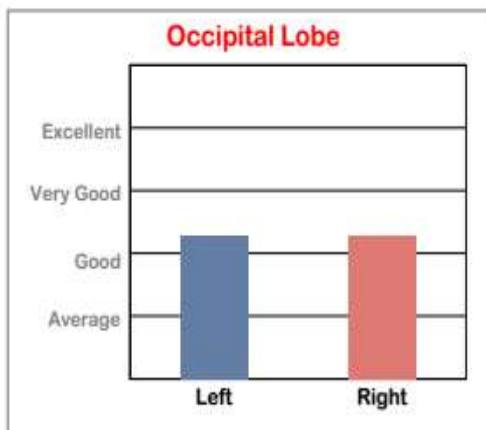
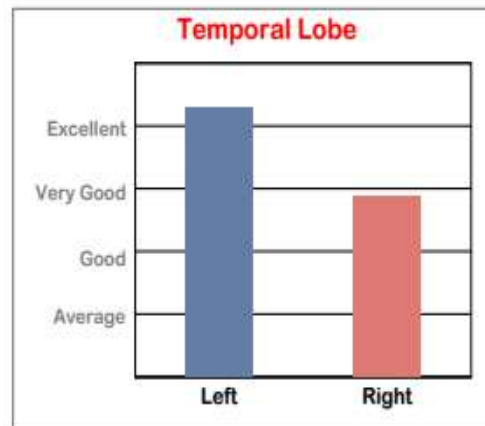
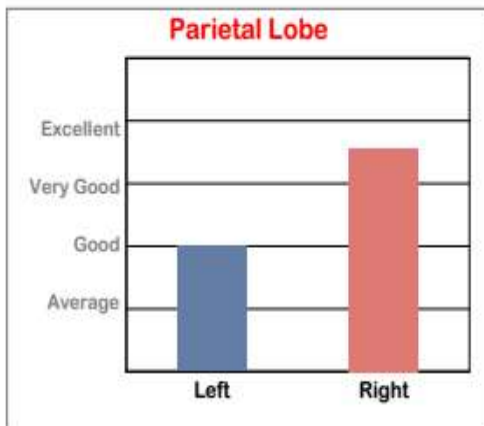
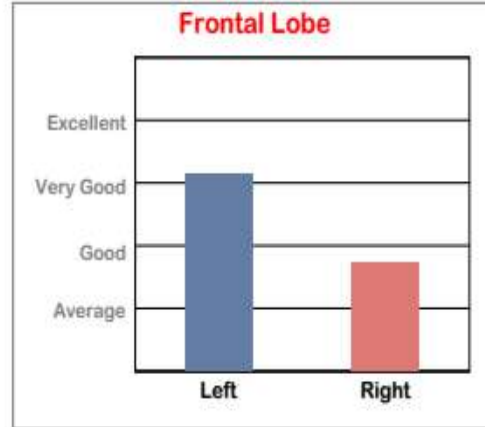
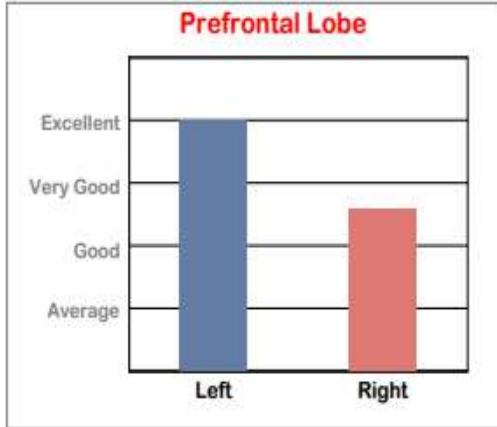
The Total Ridge Count (TRC) indicates the "Inborn Intelligence Potential" of an individual

TRC	Type	Inborn Intelligence Potential
Below 60	Type G	Very Low Potential
60 to 100	Type F	Low Potential
101 to 140	Type E	Average Potential
141 to 180	Type D	Good Potential
181 to 200	Type C	Very Good Potential
201 to 220	Type B	Excellent Potential
221 & above	Type A	Hyper Active

**Inborn Intelligence Potential for : Sample A is : Type B**

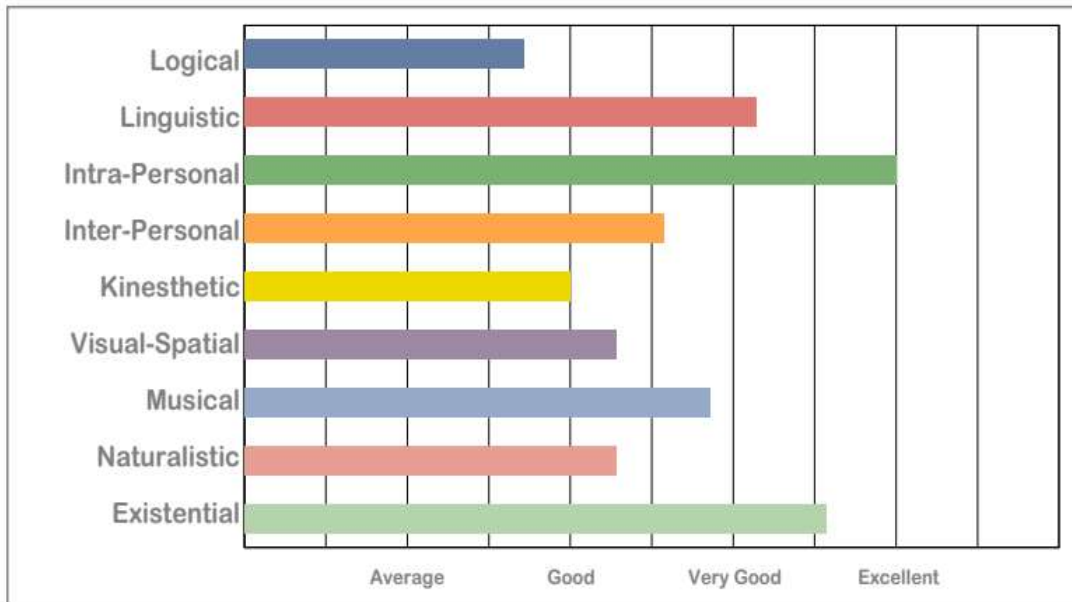
## Comparative Strength within Lobes

Comparative strength within lobes for : **Sample A**



## Multiple Intelligence Distribution

Multiple Intelligence Distribution for : Sample A



### Interpretation of Multiple Intelligence Distribution Table

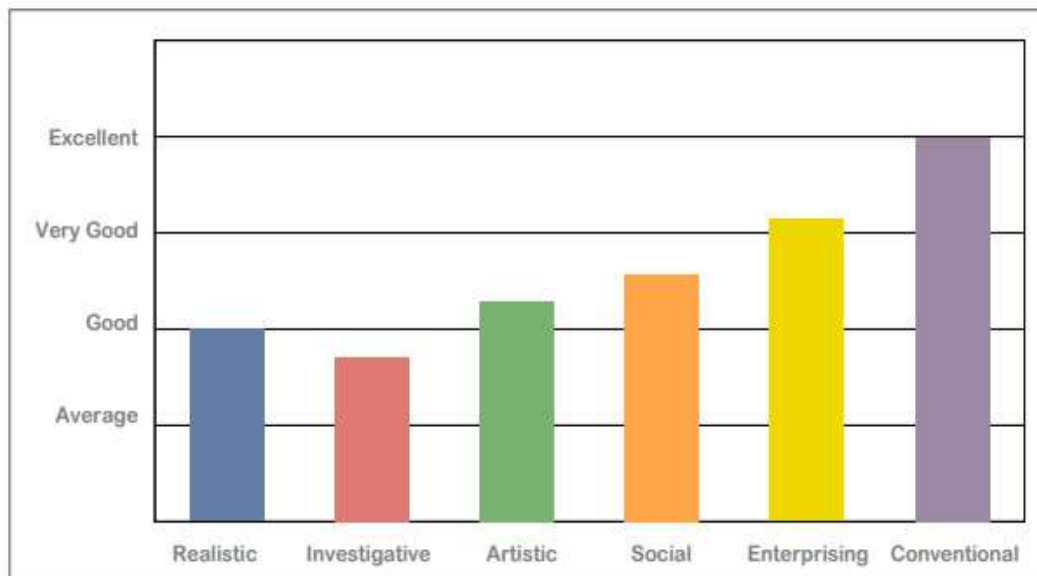
- The highest bar shows the most dominant area of intelligence.
- The longest 4 bars are considered dominant areas of intelligence.
- The intelligences which have similar strengths, are considered to be of equal potential

## Holland's Theory of Personality and Work Management Types

The six personality and work environment types described by Holland are as follows:

- Realistic (R)** - practical, physical, hands-on, tool-oriented
- Investigative (I)** - analytical, intellectual, scientific, explorative
- Artistic (A)** - creative, original, independent, chaotic
- Social (S)** - cooperative, supporting, helping, healing/nurturing
- Enterprising (E)** - competitive environments, leadership, persuading
- Conventional (C)** - detail-oriented, organizing, clerical

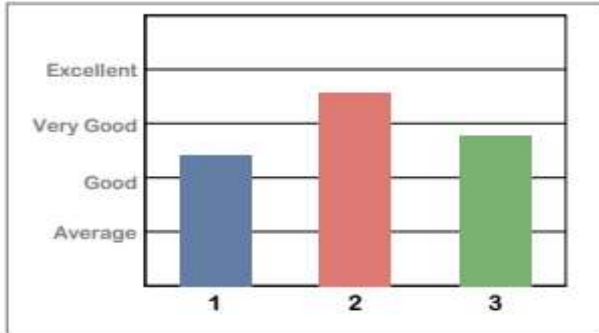
Holland's Code for : **Sample A**





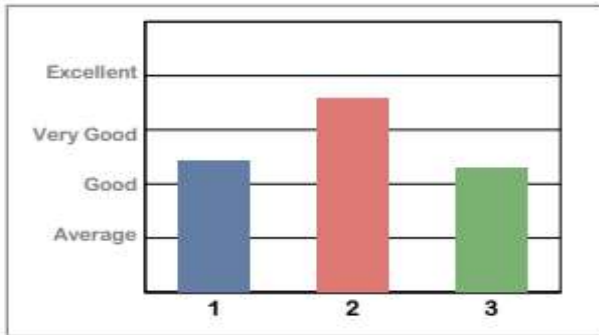
## Split MI Readings

### Split MI Distribution for : Sample A



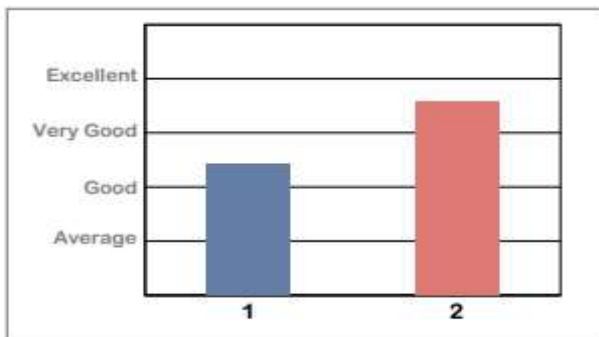
### Logical Intelligence

1	Problem Solving, Abstract Thinking
2	Numerical Skills
3	Complex Visual Spatial Problems



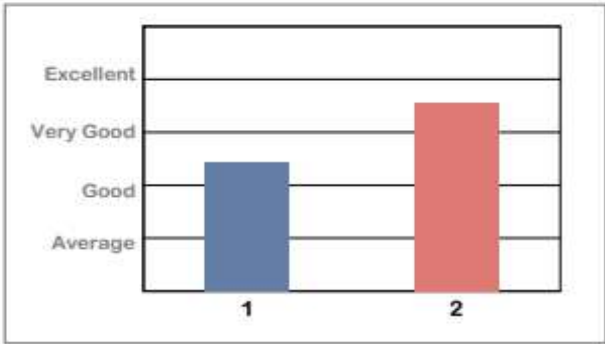
### Linguistic Intelligence

1	Non Verbal Communication
2	Verbal Memory, Language Comprehension
3	Visual aspect of Writing



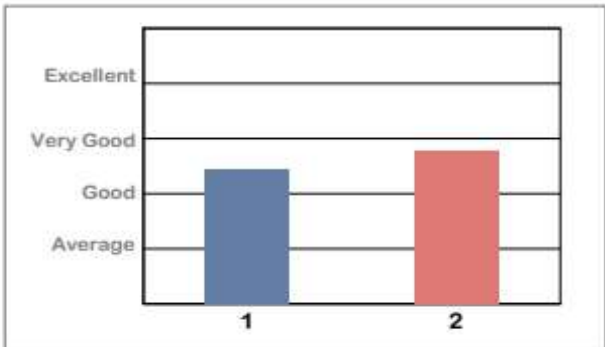
### Intrapersonal Intelligence

1	Initiative, Planning, Judgement, Reasoning
2	Motivation, Emotional Behaviour



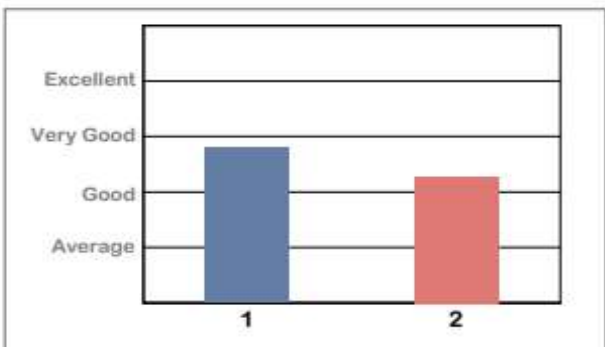
**Interpersonal Intelligence**

1	Social Behaviour, Language Comprehension
2	Memory Formation, Motivation, Emotions



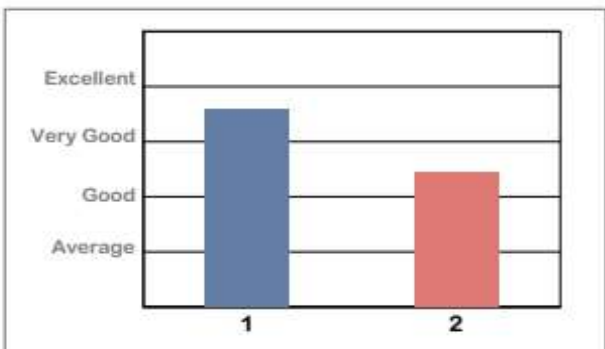
**Kinesthetic Intelligence**

1	Fine motor movements, Spatial Orientation
2	Sensory Integration



**Visual-Spatial Intelligence**




1	3D Space Processing
2	Visual Processing, Spatial Relations



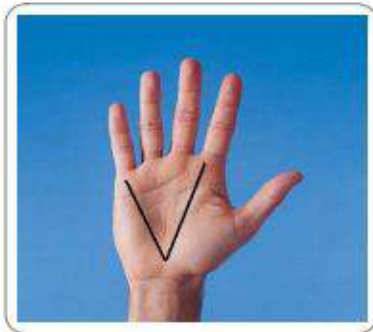
**Musical Intelligence**

1	Voice Tone & Pitch Modulation
2	Process, Recognition & Perception of Auditory Stimuli

### Preferred Learning Style

	Visual Capability	Auditory Capability	Kinesthetic Capability
<b>Rating</b>	<b>26 %</b>	<b>41 %</b>	<b>33 %</b>
			
<b>Traits</b>	Prefer to use graphics stimulation, graphs, flow-charts, reading and observation to	Prefer to use listening and discussion to learn	Prefer to use physical hands-on and practical activities to learn and understand

### Brain - Body / Nervous - Muscular co-ordination



Brain Body co-ordination reflects the degree and speed of co-ordination between the nervous muscular system, reflecting one's efficiency.

The brain is mainly made up of neurons. A nerve cell receives signals from other neurons or sensory organs, processes these signals, and sends signals to other neurons, muscles, or bodily organs.

Sample A Your Brain - Body co-ordination is : **Fast**

## **IQ, EQ, AQ, CQ, SQ QUOTIENTS**

IQ : Intelligence Quotient consists of Logical - Mathematical & Linguistic Intelligences

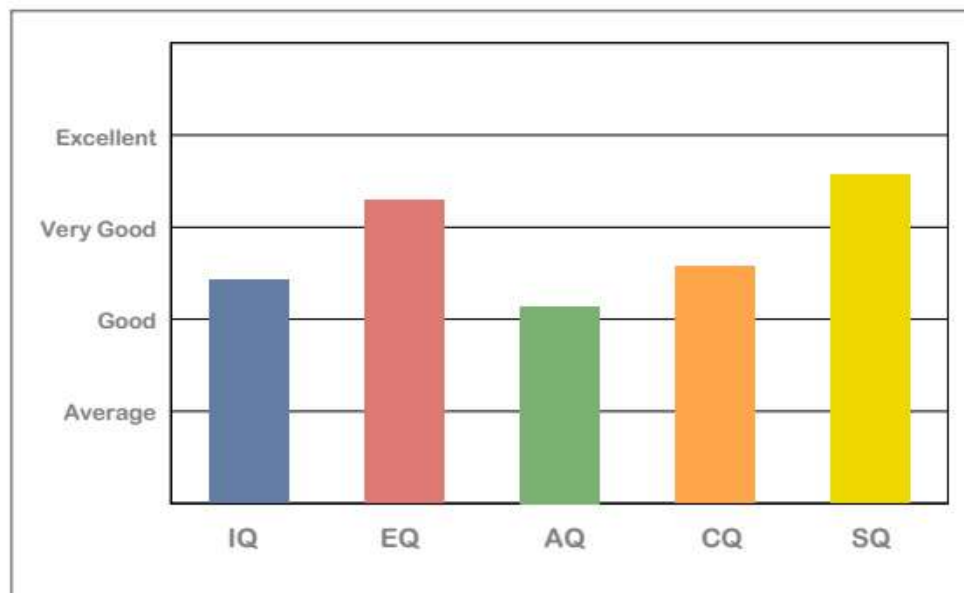
EQ : Emotional Quotient consists of Intra- Personal & Inter - Personal Intelligences

AQ : Adversity Quotient consists of Bodily- Kinesthetic & Naturalistic Intelligences

CQ : Creativity Quotient consists of Visual - Spatial & Musical Intelligences

SQ : Spiritual Quotient consists of Existential Intelligence





### **Comparative Quotient strengths for : Sample A**



## Learning - Communication Character

**Learning Communication Character** indicates methods used by an individual to gain knowledge, assimilate it and how he interacts with surrounding environment

Sample A Your learning communication character is : **Affective**

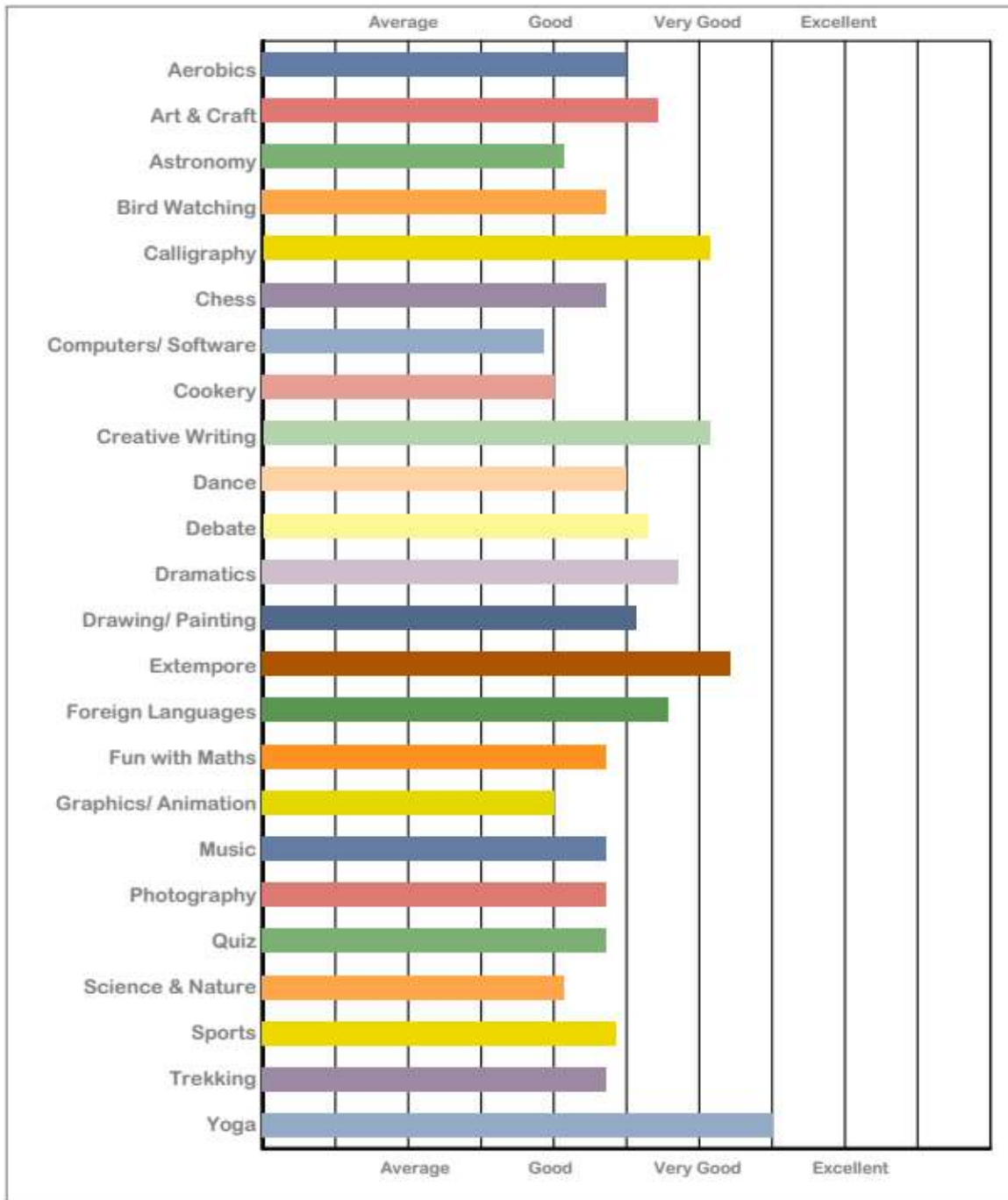
			
<b>Affective</b>	<b>Reflective</b>	<b>Cognitive</b>	<b>Critical</b>
<ul style="list-style-type: none"> <li>- Self discovery through modifications</li> <li>- Organised and planned attitude</li> <li>- Quite achiever, but thrive on appreciation</li> </ul>	<ul style="list-style-type: none"> <li>- Open minded in nature</li> <li>- Can absorb a lot of knowledge</li> <li>- Need patience and well planned approach</li> </ul>	<ul style="list-style-type: none"> <li>- Take own initiatives to gain knowledge</li> <li>- Are self centered in approach</li> <li>- Need clear goals and time to take decisions</li> </ul>	<ul style="list-style-type: none"> <li>- Love challenging environments</li> <li>- Good in self management</li> <li>- very competitive by nature</li> </ul>

## Objective / Concept Driven Model

Frontal Lobe controls the Objective and Concept Driven thinking styles - that dictates the brain's behaviour and dominant character.

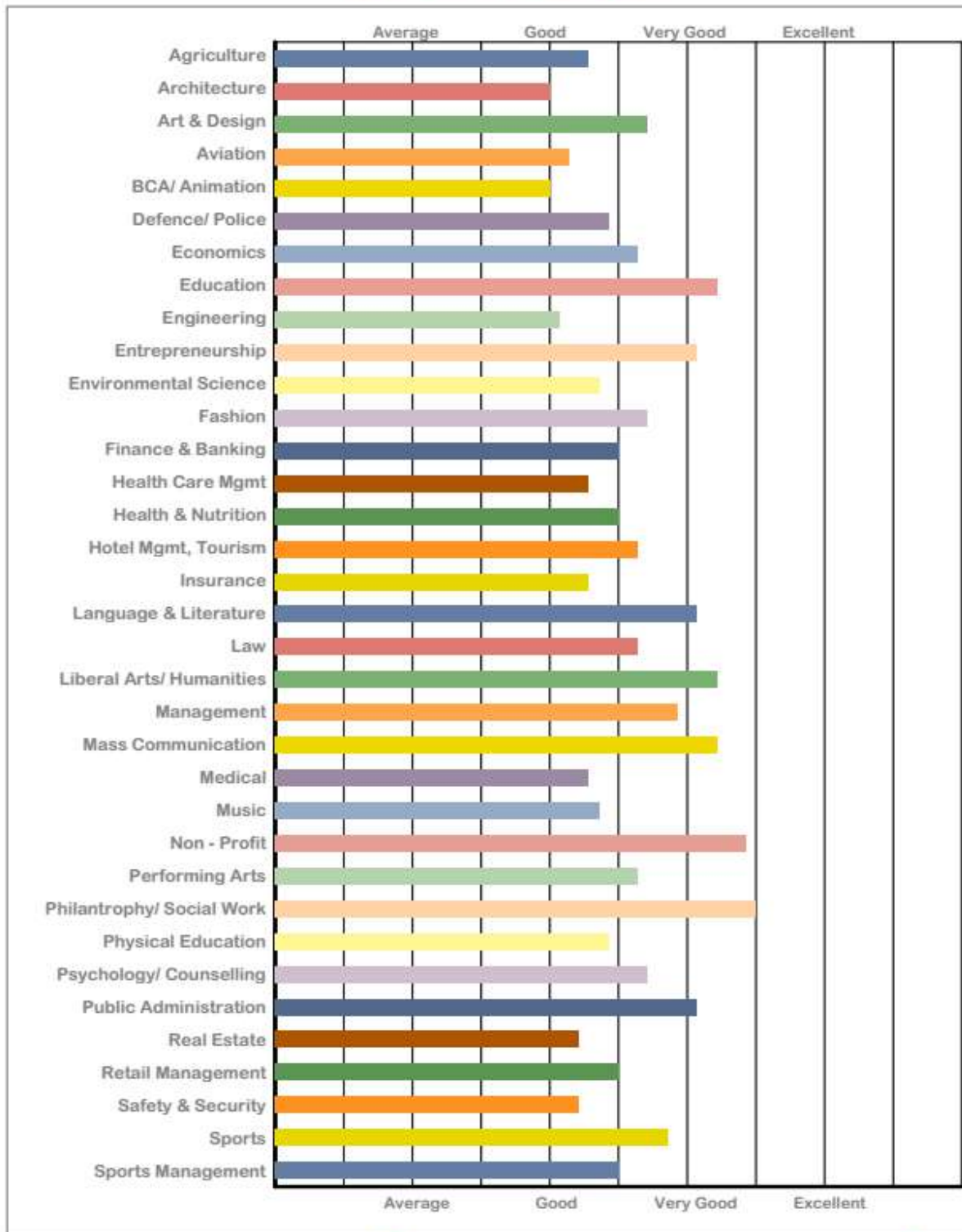
	Objective Driven	Concept Driven
<b>Rating</b>	<b>58 %</b>	<b>42 %</b>
<b>Characteristics</b>	Risk-taker, Bold, Goal-oriented, Confident, Committed	Cautious, analytical, meticulous, moderate confidence, high executive power

### Activities based on Multiple Intelligences

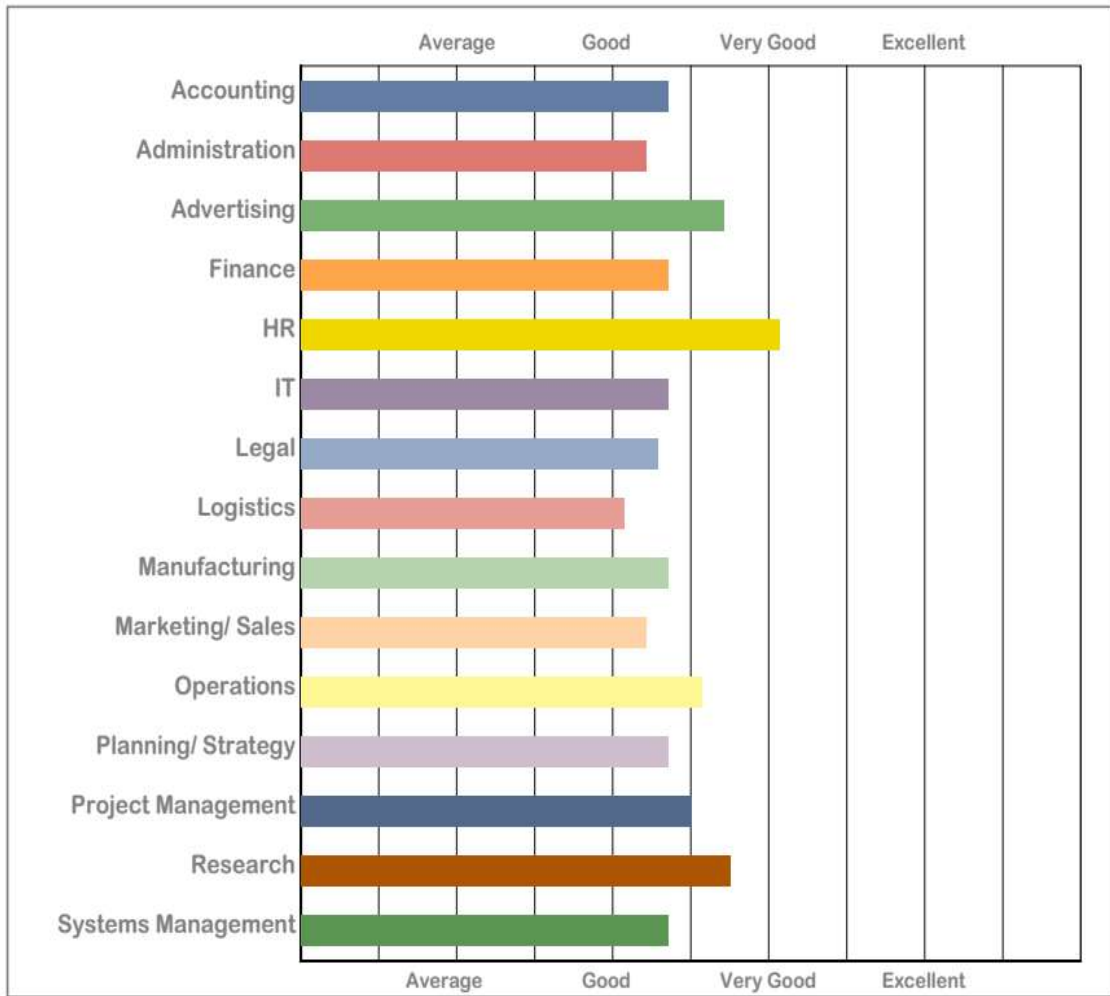




### Career Selection based on MI



## Department Selection based on MI





## **CHAPTER-VI**

### **RESULT AND CONCLUSION**

#### **RESULTS**

The overview of the dermatoglyphics technology and the dermatoglyphics multiple intelligence test analyses personality assessment which measure Adeversity Quoitent (AQ), Creativity Quotient (CQ), Emotional Quoitent (EQ) and Intelligence Quotient (IQ). The person is left brain biased, so that he is more prominen

t to logical, rational and scientific thinking with high executive ability. The person have an effective communication skill as per the test. The most prominent department selection for the person is HR where as the career selection is as social worker. The person is objective driven. The person's perfered learning style may be auditory. The person shows excellence in yoga for activity based multiple intelligence.

As per the consultaion with person whose sample is collected, the obtained report seems relevant to him. Hence, the DMIT test may be reliable for measuring multiple intelligence and personality.

#### **CONCLUSION**

In present analysis the strength of brain and inborn talents are determined by the domains of brain which include auditory, visual, kinesthetic. According to this test the intelligence of a person can be classified into various quotients which may help in education of a person, career selection for a person and also for employment distribution in various companies. By conducting this test a person can identify the sector in which he or she has maximum potential. This may help an individual to utilize his/her strength and cop up with their weaknesses. Dermatoglyphics can be used to medical purpose like to identify genetic disorders. It can be used to segregate those who are at increased risk for developing disease like cancer

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