Chapter II

LITERATURE REVIEW

This chapter comprises of the detailed explanation of research topic and its variables from every possible angle. It presents related literature review conducted by the researcher for this purpose. This chapter also discusses the history of intelligence, its evolution and various intelligence theories with special emphasis on Multiple Intelligence Theory of Gardner. The role of MI Theory in educational reforms in various countries along with Indian context is also discussed. Besides that the relation of MI with Career, Career Planning, Career Choices and Managerial Competencies is also explained in detail.

2.1. INTRODUCTION TO THE INTELLIGENCE-

When we think of ‘Intelligence’, several aspects derived by many people are available about it. The Intelligence in true sense is complex phenomena. Various experts, psychologists, Philosophers & researchers enriched and developed this concept by contributing their thoughts & theories since before a century. Still, many of them storm their brains over the related issues. Still, there are no précised views or theories to explain this concept extensively.

A long time before, many philosophers & researchers were busy to develop the effective tool to measure the human intelligence. And they came with the theory of intelligence which could determine the intelligence level of human beings. This voyage of Intelligence concept firstly began from philosophy. With progressive contributions of philosophers like Hume, Bacon & Locke, it shifted to the psychology. Here this termed as ‘competence’. M Ford (1992) proposed that it is possible to describe competence processes contributing to effective person in context functioning using the following heuristic formula-

\[
\text{Achievement/Competence} = \frac{\text{Motivation} \times \text{Skill}}{\text{Biology}} \times \text{Responsive Environment}
\]
As per this formula, to achieve the desired goal, an effective functioning of a person needs a motivated person with skills whose biological capacities supported with an environment which has informational and material properties. But it did not actually represent the effective functioning. Then some psychologists such as Stanford Benit, Kaufman, Wechsler & several others came with concept called ‘IQ’ (Intelligence Quotient). Then Psychometric Tests were developed to know the individual’s intelligence level. In this concept the level of performance of child in a test could be expressed by reference to age at which the average child would be able to achieve that level of performance (David J. Bartholomew, 2004). But with further studies they found that this concept of IQ is not enough to justify the human intelligence. To criticize IQ, Rose (2009) says- ‘Intelligence is what IQ Tests measure. Intelligence becomes what we choose it to be by the tests we ask people to take’. Over a century, through these IQ Tests (i.e. measures of intelligence), the psychometricians succeeded to inculcate in to our minds that ability to perform the school related tasks like defining words, remembering words, shapes etc. means intelligence. The students scoring consistently good in it were considered intelligent in general aspects. But the psychologists like Ryle, H Gardner, Sternberg and others started to contradict to the view of single competency in human being. As a result in 1983, Howard Gardner derived the concept of Multiple Intelligences. In this concept, he proposed that it is based on studies not only of normal children and adults but also by studies of gifted individuals, of persons who have suffered brain damage, of experts and virtuosos, and of individuals from diverse cultures. In order to consider all the aspects of abilities and talents possessed by humans, he suggests that people don’t have only the intellectual capability but different sets of intelligences. Computer Specialists have begun to develop theories and applications
of Artificial Intelligence, some of their systems are general problem-solvers, while others are well-delineated expertise (Gardner, 2001)

Every person in this world possesses different abilities to understand, to conceptualize the things around them. Also same person can show different intellectual performance at different situations & at different conditions. The consistency in their intellectual performance is also the matter of concern. **Two aspects are commonly considered- General and Technical.** People like Psychologists or Philosophers present technical aspect. The word Intelligence came from the **Latin word- ‘Intelle-gere’ which does mean ‘To pick out’.** In General Sense, intelligence seems as an ability of an individual to perform effectively to attain a goal in available conditions or environment.

Psychologists and Philosophers try to explain this complex concept technically since centuries. Many experts tried to define this concept, some of them are as follows-

- ‘It is what the tests of intelligence tests’ (Boring, 1923)
- ‘The goal-directed adaptive behavior’ (Sternberg & Salter, 1982)
- ‘The aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment’ (David Wechsler, 1944)
- ‘It is an innate, general, cognitive ability of an individual’ (Burt, 1955)
- ‘A systematic collection of abilities or functions for the processing of information of different kinds in various ways’ (Guilford, 1967)
- ‘Intelligence is the basic potentiality of the organism, whether animal or human, to learn and to adapt to its environment’ (Vernon, 1979)
- ‘Intelligence is a quality of behavior & intelligent behavior is effective ways of coping with the demands of a changing environment’ (Anne Anastasia, 1986)
‘The unique propensity of human beings to change or modify the structure of their cognitive functioning to adapt to the changing demands of a life situation’ (Reuven Feuerstein, 1990)

‘An ability to deal with cognitive complexity’ (Linda Gotterfredson, 1997),

‘Intelligence is not a thing but a collective property’ (David J. Bartholomew, 2004)

‘It is an ability to solve problems or to create products that are valued within one or more cultural settings’ (H Gardner, 1999)

‘Intelligence can be defined, at least in very general terms, as a characteristic of a person’s functioning associated with the attainment of relevant goals within some specified set of contexts and evaluative boundary conditions’ (Sternberg & Ruzgis, 1994)

By understanding all these definitions and studying the concept of intelligence, researcher puts his views on intelligence that, “it is the collective ability of an individual related to problem solving or attaining a desired goal by defining, redefining & recognizing the problem through all the available resources in actual circumstances using his past experience and learning”

From above definitions of the term Intelligence, we can say that the views of experts on this concept have been changed with time. The further figure shows the transition from Old View to the New View of Intelligence.
2.2. EVOLUTION OF INTELLIGENCE CONCEPT WITH TIME-

<table>
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<tr>
<th>Historical Foundations</th>
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<tr>
<td>Plato (ca. 428/42-348/347 BCE)</td>
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<td>Aristotle (384-323 BCE)</td>
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<td>Augustine (354-430 AD)</td>
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<td>Aquinas (ca. 1225-1274)</td>
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<td>Smith (1723-1790)</td>
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**Time Period 1-"Modern Foundations"**

During this time period, psychology began to emerge as a discipline separate from philosophy, mathematics, and biology. However, individuals from these diverse fields continued to influence psychological discourse and the study of intelligence.

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<thead>
<tr>
<th>Locke (1632-1704)</th>
<th>Gauss (1777-1855)</th>
<th>Galton (1822-1911)</th>
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<td>LaPlace (1749-1827)</td>
<td>Mill (1806-1873)</td>
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<td>Darwin (1809-1882)</td>
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**Time Period 2-"The Great Schools"**

This period in history witnessed the advent of several prominent European schools of psychology. Some of the American psychologists profiled on our site studied overseas, then returned home to establish influential psychology programs in the United States. The study of intelligence gained popularity during this era, bolstered by the work of Wilhelm Wundt, James McKeen Cattell, G. S. Hall, and Hermann Ebbinghaus.

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<thead>
<tr>
<th>Wundt (1832-1920)</th>
<th>Ebbinghaus (1850-1909)</th>
<th>Wissler (1870-1947)</th>
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<tr>
<td>James (1842-1910)</td>
<td>Freud (1856-1939)</td>
<td>Edison (1847-1931)</td>
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<td>Hall (1844-1924)</td>
<td>J M. Cattell (1860-1944)</td>
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(Source: Silver, Strong & Perini, 2000)
**Time Period 3-"The Great Schools' Influence"**

As the students of the Great Schools began to form their own programs, the number of theoretical and empirical investigations of intelligence increased. A milestone during this time period was the development of the United States' Army Alpha and Beta testing program, established under the direction of Robert Mearns Yerkes. This massive project gave rise to the first group intelligence tests and provided a fertile training ground for many psychologists who would become influential in the ensuing decades.

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<td>E. L. Thorndike (1874-1949)</td>
<td>Stern (1871-1938)</td>
<td>L. Hollingworth (1886-1939)</td>
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<td>Pearson (1857-1936)</td>
<td>Yerkes (1876-1956)</td>
<td>Vygotsky (1896-1934)</td>
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**Time Period 4-"Contemporary Explorations"**

The enthusiasm generated by the formation of the Great Schools and the Army Alpha and Beta testing program laid the foundation for the work done during this period. New statistical techniques and modern experimental designs helped to make standardized testing of intelligence and achievement a way of life in most Western countries. Although g-centric theories dominated, theories of "multiple intelligences" began to appear in the work of Thurstone and Guilford.

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<td>Anastasi (1908-2001)</td>
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**Time Period 5-"Current Efforts"**

Current trends in intelligence theory and research involve the formation of more complex multiple intelligence theories and a de-emphasis on the use of standardized testing to measure intelligence. At the same time, the availability of relatively cheap computers has promoted advances in statistical analysis, providing new perspectives on the measurement of intelligence. The emergence of reliable genetic and neurological research methodologies is creating a new area of study in which environmental, biological, and psychological aspects of intelligence are studied simultaneously.

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<td>Carroll (1916 - )</td>
<td>Kamin (1924 - )</td>
<td>Sternberg (1949-)</td>
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<td>Renzulli (1936 -)</td>
<td>A. Kaufman (1944 - )</td>
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<td>Carol S. Dweck (1946 - )</td>
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<td>Simonton (1948 - )</td>
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Table No. 2.2- Table showing Evolution of Intelligence Concept
(Source: http://www.intelltheory.com/periodIndex.shtml)
2.3. FACTORS AFFECTING INTELLIGENCE-

As we have seen, the Intelligence is humanitarian concept which is dynamic. It can be increased with study and practice (Sternberg, 1989). As it can rise on one side, it can decline on the other (Horn, 1967). The Intelligence in different persons can be found different. The level of intelligence is also different. In schools we can find students with similar age do not have same intellectual abilities. Some students do better & some cannot. Some students do better in one of the intellectual abilities, while other students do better in another. Even after attaining adult age, people can have different intellectual abilities. So, one question gets up in mind that why does it happen? As ‘the curiosity is the mother of research’, this question led thinkers, psychologists, researchers to find the factors creating impact on the intellectual abilities of people & creates difference in intellectual performance of people.

So, the experts, psychologists and philosophers tried to find out root cause or factors due to which there is difference found in intelligence of people. Some say that the basic or general factors are two i.e. Hereditary Factors and Environmental Factors. The first one deals with those abilities of an individual, he got from his parents/ancestors through genetic transformations. While second factor deals with the factors around the person like family influence, society in which he brought up, friends, schools, culture and own experiences through various circumstances. This issue called Nature Vs Nurture gives controversy. The English philosopher Locke argued that the mind of a new born baby is blank and environment & his own life experiences build his abilities to perform. While other French philosopher Rousseau proposed that person have some natural characteristics or genetic factors are more vital than environment to develop the person’s abilities.
According to ancient Indian philosophy and history before millenniums; it was already accepted that there is equal role of genetic factors and environmental factors in the development of intellectual abilities of an individual. Still, the psychologists of present era argue over this issue. The psychologist Scarz discusses these two factors-

2.3.1. **Hereditary Factors**-

Heredity is nothing but the genetic features transmitted from one generation to next generation. The *individual’s personal genetic code is called ‘phenotype’ which includes appearance & psychological features i.e. intelligence, personality & creativity.* The intelligence is nearly inherited which comes through families (F. Galton, 1869).

Crooks & Stein (1991) also found that **parents with high IQs tend to have kids with such high IQ & vice versa.** Again Jensen (1969) studied by various angles & proposed that **the inherited factors like heredity have influence around 80% while 20% is for environment.** Studies of twins & studies of adopted children proved the genetic features overlap between twins & the genetic correlation between twins found positive than adopted children. **The correlation between the IQs of kids and their biological mothers found much higher than correlation between IQs of kids and their adoptive mothers** (Horn, 1983).

Also Jensen (1969) stated that the people from particular race have less IQ that people from other race. But, before some years, **the girl form ‘Negros’ found with IQ more than 120 which is much higher than average.** So, researchers found that though the hereditary factors are playing vital role in intelligence, the other factors are also play prime role in the same.
2.3.2. Environmental Factors-

Heredity is not the only factor which influences the intelligence. The environment also plays an important role in that. Environment consists wide range of simulations that the child is subjected to the environment in which he grows and lives.

Researches also show that though the fraternal twins & siblings share the same genetic features, the correlation between IQs of fraternal twins is a bit higher than that for ordinary siblings. Because of environmental opportunities and experiences are similar to fraternal twins than ordinary siblings. Also, the researches show that the twins grown in different environment show different intellectual performances. This recognizes the importance of environment in the individual’s intelligence.

In this environment, the prenatal as well as postnatal environment can affect the intelligence of child. The mother’s health, nutrition, peaceful and healthy atmosphere helps to develop the intelligence of a child. The postnatal environment like family, society, culture etc. also creates impact on intelligence. These factors can be explained in detail as further-

a) Environment at home/family- In everyone’s life the home and family play prominent role and create huge impact on his/her cognitive abilities called ‘intelligence’. The home is first learning institution for every child. This environment at home provides an identity to the child & it also helps him/her to build his self awareness and prepares him/her to face the realities in the world. A supportive environment to encourage, to satisfy curiosity & to improve self reliance leads to better intellectual performance of children (Kelley & Worieill, 1977). The interaction between child & his parents also favors for better intellectual performance. The expectations of parents from their child to get better
education leads child to get it. So, it is also found that the educated parents expect that their child should go for more education. It means educated parents influence the intellectual performance of child as they can provide better supportive environment required for the same.

b) **Socio-Economic Status**- The income group to which we belong, also influences our intelligence level and intellectual performances. *An individual belongs to better socio-economic background may expose to more intellectual stimulation, opportunities and better nurturing environment than who do not*. Through the researches, it was found that the higher socio-economic status leads to higher average IQ of an individual, these differences in intellectual performance are to be sustained throughout school days (Harrell & Harrell, 1945).

c) **Culture**- Culture refers to a system of beliefs, attitudes and values came through generation to generation in to the society. As in Indian context, the various subcultures, caste groups and traditional family occupations developed & enriched by many generations. The Indian studies consider that the intellectual performance of some caste groups (so called upper caste) observed better than others. But many studies differ from this. But again it was perceived that these so called upper caste groups are better in verbal and linguistic part while other groups are observed better in other skills and abilities. This shows the multiple aspects of intelligence. The *cultural values and norms have strong hold on intellectual abilities* of individuals coming under it e.g. *Chinese culture emphasizes Bodily/Kinesthetic Abilities* which results in growing interest in gymnastics & other sports among those people which makes them to win highest number of medals in Olympics and other games.
d) Gender Differences- This issue is being argued over centuries that who is more intelligent, men or women? The average of both does not show difference in their intellectual performance. The researches show that the women found better in language skills, verbal and musical abilities while men usually found better in mathematical operations, reasoning and spatial abilities. Some researchers argue that the difference in intellectual performance of men and women found due to difference in social trainings provided to them separately through centuries. Also the cultural and society norms, biological differences led them to perform differently on different intellectual tasks. But some do not believe in such differences of intellectual performances. This concept needs deep study which may throw light on it.

These all factors influence the intelligence of an individual. We cannot segregate the impact of these factors on individual, as they collectively affect individual’s intelligence & not absolutely. Through this research, researcher also wants to find out this relationship between factors and intellectual performance of MBA Students which may give some inputs for further researches on this aspect.

2.4. THEORIES OF INTELLIGENCES-

2.4.1. One Factor/ Unifactor Theory-

This theory is derived by W. Stern in late 19th century. He comprised the capacities of human being in a single factor. Stern specified this single factor as a ‘common sense’ in general. It was the earlier opinion regarding the term ‘Intelligence’. This theory does not have any firm ground to exist as it refuses the differentials of the abilities of different people. This theory tends towards that people are correlated with each others. As per this theory, every individual has some basic abilities to understand, realize & to interpret the incidences happening around them. This is not a
fact. Besides having many lacunas in it, it has its own importance for encouraging other experts for further researches in the field of intelligence.

2.4.2. Two Factor Theory/ ‘g’ Factor Theory-

After unifactor theory, many experts, psychologists, researchers got attracted to develop the concept of intelligence. In this wave of development, a British Psychologist Spearman came up with his new theory in 1904 called Two Factor Theory. In 1904 he published one article on this issue. In this article, using statistics, he proposed that there are the two factors which categorize the intellectual abilities of an individual. He called first factors as- “General Intelligence (g)” or general factor (Spearman, 1904). It states that person scoring well in one mental ability test can also score well in others. It means that factor can be found common or general for all other tests. According to him the intelligences is the general cognitive ability could be statistically expressed. The term General Intelligence cannot be specific to any domain of knowledge. Thus it must be either a function of a cognitive control process that is involved in all domains of a non-cognitive psychological property of the brain (Anderson, 1992).

![Diagram of g Factor Theory](image.png)
On the other side, he determined the **second factor which he called ‘s’ factor (Specific Factor)** (Spearman, 1904). For this he proposed that, every individual has some specific abilities to perform on a specific mental ability test & that ability differs from test to test. Spearman emphasized the ‘g’ factor, than’s’ factor. As ‘g’ is individual’s inborn ability. **Greater the ‘g’; more is the success to individual in life.**

The ‘s’ factor can be acquired from surroundings & it varies as per contingencies. Theory was criticized for not having enough empirical evidences. Other psychologists then studied & proposed their own theories to develop this concept of intelligence.

### 2.4.3. Thorndike’s Multifactor Theory-

Contradicting the theory of general intelligence, Thorndike (1977) the American Psychologist derived the new theory i.e. **Multifactor Theory** of Intelligence. In this theory he proposed that there are specific stimuli & related specific responses. There is positive correlation between these stimuli & response. **Thorndike proposed that the intelligence is nothing but the convenient name for almost infinite number of actual or potential specific connections between stimuli & responses.** He distinguished the attributes of intelligence in four factors-

**a) Level-** this factor deals with the **difficulty of a problem** or task that can be solved. That means the level of difficulty of tests determines our level of intelligence. More difficult the test or problem that can be solved, more is the level of intelligence.

**b) Range-** This factor deals with the **number of problems/tasks at any specific level of difficulty**. Range is determined not only by level but also by the wide experience & by opportunity to learn.
c) **Area** - This factor refers to the number of situations collectively at each level of difficulty. It is summation of all ranges at each level of intelligence.

d) **Speed** - This factor refers to rapidity/spontaneity with which we can respond to the items. We should not emphasize speed too much in intelligence test.

This theory faced criticism on giving emphasis on highly specific factors of intelligence.

### 2.4.4. Thurstone’s Theory of Primary Mental Abilities/ Group Factor Theory-

In contradiction to Thorndike’s theory of multifactor, Thurstone states that intellectual performance or activities cannot be expression of highly specific factors as in Thorndike’s Theory. This theory is more near to the Spearman’s theory. Unlike, **Thurstone made a group of those ‘certain’ mental operations which have in common primary factor** (Thurstone, 1938). These primary factors lead individuals to psychological & functional unity. This functional/psychological unity found different for different mental operations. The set of mental operation is called ‘group’. Another group has its own ‘primary’ factor which is unified. Thurstone has given the six primary factors as follows-

**a) The Number Factor (N)** - It deals with the ability to do rapid numerical calculations with accuracy.

**b) The Verbal Factor (V)** - This factor deals with the ability of an individual’s verbal comprehensions.

**c) The Space Factor (S)** - It is the primary factor refers to mental operations involved in any task in which the subject manipulates he imaginary object in space.
d) **The Memory Factory (M)** - It involves the individual’s ability to memorized things, events, and objects quickly.

e) **The Word Fluency Factory (W)** - This factor deals with the ability which involves when subject is asked to think of isolated words rapidly.

f) **The Reasoning Factor (R)** – This factor deals with ability that found tasks requiring a subject to discover a rule or principle involved in a series or groups of letters.

To these six primary factors Thurstone called, Primary Mental Abilities.

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2.4.5. **Guilford’s Model of Structured Intellect**

Guilford was a psychologist influenced by the Spearman’s work and his thoughts on Intelligence. He derived his new theory to contribute in development process of intelligence concept. According to him the intellect model of an individual has three dimensions in general that he proposed in this theory (Guilford, 1967). He states that every task can be categorized according to its Context, Mental Operations involved & Cognitive Product resulting from those operations. The first dimension Context was further categorized in five, such as Visual, Auditory, Symbolic, Semantic & Behavioral. Then, he categorized Cognitive Product in six parts like Units, Classes, Relations, Systems, Transformations and Implications. Supporting to this, he further categorized the third dimension i. e. Mental Operations in- Cognition, Memory, Divergent Production, Convergent Production and Evaluation. He represents this structure of Intellect Model as a cube with each of the above three dimensions as shown in following diagram-
Guilford made his model an open system which allows newly discovered categories in any of the above dimensions. This theory has its own importance in the field of Intelligence.

### 2.4.6. Vernon’s Hierarchical Theory of Intelligence-

An **English** educational psychologist **Philip Vernon** (1950) who was influenced by Burt & Spearman posed his views on intelligence through this theory called ‘Vernon’s Hierarchical Theory’. Through this theory, **Vernon tried to bridge a gap between two extreme theories i.e. Spearman’s Two Factor Theory & Thurstone’s Multifactor Theory.** In his hierarchy, he placed the Spearman’s General Intelligence i.e. ‘g’ factor at the top followed by various Major, Minor & Specific group factors stated by Thurstone. For that he made the levels of generality as follows-

**a) Top Level (g)-** It is the Spearman’s factor with largest source of variance among individual.

c) **Third Level**- He placed the Minor group factors here those divided from above major factors.

d) **The Bottom Level**- At this level, he placed the Spearman’s Specific Factors.

Vernon’s further researches on the effects of Genetic & Environmental attributes over the intelligence of person. According to his research approximately 60% variance in individual’s intellectual ability is attributable to genetic contribution (Vernon, 1979).

### 2.4.7. Cattell’s Fluid & Crystallized Intelligence Theory-

The **Raymond B Cattell British Psychologist** who was the student of Spearman, derived this theory of Fluid & Crystallized Intelligence. In this theory, he states that the general intelligence is in fact a combination of around 100 different abilities functioning collectively in several ways in individuals. **He further categorized these all abilities in to two i.e. Gf (Fluid Abilities) & Gc (Crystallized Abilities)** (Cattell, 1971). The Fluid Abilities comprise of to act quickly, to think, to solve problems & to retrieve short-term memories which generally required in uncertain contingencies. Fluid Intelligence (Gf) is grounded in physiological efficiency & is thus relatively independent of education & acculturation (Horn, 1967). While on the other side, the Crystallized Intelligence (Gc) comprises the abilities having roots in learning & acculturation reflected through general information, vocabulary & wide variety of acquired skills (Horn & Cattell, 1967).

### 2.4.8. Sternberg’s Trierarchic Theory of Intelligence-

The **American Psychologist Robert J Sternberg** (1986) derived this theory. In this theory, he identified various components of intelligence. **Some students who are not good in school, found good in some practical, experimental parts.** This new aspect
of intelligence led him to this theory. Like Gardner (1983) he classified this human intelligence in multiple parts. He categorized these components in three main categories-

  a) **Practical Intelligence**- This category comprises the ability to adapt themselves to the environmental demands. He called them Street Smarts (Sternberg, 1986)

  b) **Experiential Intelligence**- This category is defined as the abilities to cope with novel situations. The ability of an individual to relate & to compare the new situations or incidences to the old or experienced situations in past. Through the experience with time, one can be able to solve the task or problem quickly.

  c) **Componential Intelligence**- This category deals with the individual’s abilities to process the information effectively. These skills include- encoding information, to combine & to compare the information required to come to the solution.

In this theory, like H Gardner, Sternberg also believes that the intelligence can be increased with focused efforts, study & practice (Sternberg, 1989). He also states that one person can be said talented in more than two components.

**2.4.9. Carroll’s Three Stratum Theory**-

Carroll derived this theory of intelligence in 1993. This theory is hierarchy of cognitive abilities of an individual. It is actually stand on factor analysis of correlation among individual differences (Carroll, 1993). Through that he classified the abilities of an individual in the layers called- Narrow, Broad & General Cognitive abilities. The differences among individuals’ performance are not mere
artifacts of a mathematical process but likely reflect physiological factors explaining difference in ability (Carroll, 1993).

He further states that the taxonomic dimension in the distinction between Speed Factors & Level Factors. **Level Factors are related to the difficulty of the tasks & Speed Factors are related to the rapidity in performing the tasks.** Though it looks like Guilford structure of intellect but Carroll refuses it strongly. This theory can be explained by the following diagram.

![Diag. 2.3- Carroll’s Three Stratum Theory](http://en.wikipedia.org/wiki/Three_stratum_theory)

**2.4.10. CHC Theory of Intelligence (Cattell-Horn-Carroll’s Theory of Intelligence)**

Through the combination of **Cattell- Horn’s Fluid & Crystallized Theory & Carroll’s Three Stratum Theory**, a new theory i.e. CHC Theory has been **derived.** The Carroll in his theory already covered the elements required. But further modifications in that were added in this theory. This is the most comprehensive and empirically supported theory. This CHC Model was expanded by McGrew (1997) & later revised by Flanagan (1998). McGrew studied Cattell-Horn’s Theory & Carroll’s
Three Stratum Theory deeply and then extended it to new theory. He kept the Carroll’s hierarchy as it was, but extended the range of abilities. He kept ‘g’ at top. In second strata called ‘Broad’, he included 10 cognitive abilities of human being. These 10 abilities further divided in 70 in the third strata called ‘Narrow’.

The 10 ‘Broad’ abilities are as follows-

a) **Gc (Crystallized)** – It comprises of acquired knowledge to committee, it to others & ability to use learned experiences.

b) **Gf (Fluid)** – It deals with ability to form new concepts to solve problems with new information & reasoning.

c) **Gq (Quantitative Reasoning)** – It refers to the ability of an individual to understand & interpret the quantitative information and their relation.

d) **Grw (Reading & Writing Ability)** – It includes the individual’s ability to read & write effectively.

e) **Gm (Short term Memory)** – It deals with ability of a person to hold information immediately and use it within short span of time.

f) **Glr (Long term storage & Retrieval)** – This is an ability to store information for a long time and retrieve it at right time.

g) **Gv (Visual Processing)** – It includes the individual’s ability to perceive, interpret, analyze the visual patterns.

h) **Ga (Auditory Processing)** – This is the ability of an individual to analyze, synthesize and to discriminate the auditory stimuli.

i) **Gs (Processing Speed)** – This includes the ability to perform the tasks concentrated quickly under certain pressure.

j) **Gt (Decision Time)** – It comprises the ability to reflect to respond to the contingencies.
These 10 abilities further extended to 16 by McGrew & Flanagan (2005) as follows-

2.4.11. Ceci’s Biological Theory-

According to Ceci (1990), all the multiple intelligences are based on individual’s biological process limits up to mental processes. Ceci further states that these processes are closely related to the challenges to face in his environmental domains called ‘contexts’. He categorized these contexts as- Mental, Social or Physical. The context means a domain of Knowledge & other relevant factors like- Education, Personalities & Motivation.
2.4.12 Goleman’s Theory of Emotional Intelligence-

Besides the various intelligences theories, Goleman derived a new theory of Emotional Intelligence (Goleman, 1995). This theory includes the ability of an individual to control, to react, to identify emotions of others and own. Goleman states that abilities such as being able to motivate oneself & persist in the face of frustrations; to control impulse and delay gratification; to regulate one’s moods & keep distress from swamping the ability to think; to empathize and to hope (Goleman, 1995).

2.4.13 Gardner’s Theory of Multiple Intelligence-

2.4.13.1. Theory-

Howard Earl Gardner born in 1943 at Pennsylvania in a family shifted from Germany in 1938. By getting his earliest lessons through a preparatory school in Kingston, with support and guidance from excellent teachers, he then came to Harvard University to study history. There he luckily got a tutor like Erik Erikson a psychoanalyst who shaped the ambitions of Gardner. People like sociologist D Riesman, cognitive psychologist Jerome Bruner whose research work and knowledge of human beings led Gardner to study and investigate the human nature and their thinking patterns. With his increasing interest in psychology and sociology he graduated in 1965. Besides working for Bruner in famous project called ‘Man- A Course of Study’, he entered himself for doctoral program under Harvard University in 1966. After a year later, he became a part of Project Zero research team for Arts Education in US. This project found a milestone for his career. He earned his doctorate in 1971 with the dissertation on ‘Style Sensitivity in Children’. Besides his research work in Project Zero, he became lecturer and then professor of Cognition.
and Education at Harvard Graduate School up to 1986. Project Zero developed as a major research centre for education - and provided an intellectual home for a significant grouping of researchers (Mark Smith, 2002). Then his project on Human Potential called ‘To assess the state of scientific knowledge concerning human potential and its realization’ found a turning moment for his professional life (Mark Smith, 2002).

Gardner derived his famous theory of intelligence called ‘Theory of Multiple Intelligences’ through his book ‘Frames of Mind’ in 1983. Opposite to a single entity view of traditional theories, he proposed the multiple view of intelligence. According to Gardner the intelligence is nothing but 'the capacity to solve problems or to fashion products that are valued in one or more cultural setting' (Gardner, 1999). At the initial stage of his research he emphasized on to possess following eight signs to qualify as a part of MI Model-

a) Potential isolation by brain damage.

b) To be evident in the existence of exceptional individuals.

c) An identifiable core operation or set of operations.

d) A distinctive development history, along with a definable set of 'end-state' performances.

e) An evolutionary history and evolutionary plausibility.

f) Support from experimental psychological tasks.

g) Support from psychometric findings.

h) Susceptibility to encoding in a symbol system. (Gardner, 1983)

Howard Gardner initially formulated a list of seven intelligences. His listing was provisional. The first two have been typically valued in schools; the next three are
usually associated with the arts; and the final two are what Howard Gardner called 'personal intelligences' (Gardner 1999). He categorized these seven intelligences into three broad aspects. In the first one Spatial-Visual, Logical/Mathematical & Bodily-Kinesthetic are viewed as “Object Related” forms of intelligences. Verbal-Linguistic & Musical are viewed as “Object Free” forms of intelligences which are not shaped by the physical world but are dependent upon language & musical systems. At last the third category comprises of Inter-Personal & Intra-Personal Intelligence is viewed as “Personal Intelligence”. These seven intelligences he further extended to eight with Naturalistic. All human possess at least eight distinct intelligences (Domains) which exist in a particular proportional blend unique to each individual (Gardner, 2006). These all categories of Intelligence in this theory are described as follows-

a) Linguistic Intelligence- As the name suggests, this kind of intelligence refers to language functions of human being i. e. listening, speaking, reading and writing (Gardner 1999). It relates with individual’s performance in the use of language with proficiency and fluency requires describing incidents & events, expressing ideas & thoughts along with an ability to communicate with others. Persons strong in this intelligence are mostly linguists, authors, teachers, lawyers etc. Some of the famous personalities would possess this intelligence strongly, are- Chetan Bhagat, P L Deshpande, Ram Jethmalani etc.

b) Logical & Mathematical Intelligence: This is the intelligence which commonly deals with the person’s ability to compute, to analyze, reasoning, to forecast, to predict and to conceptualize. It determines the performance of a person needs in solving a problem, analyzing things and conceptualizing. People strong in such abilities can handle difficult problems & complications excellently, People
possessing this intelligence strongly are- Ramanujan, Einstein, A P J Abdul Kalam, Prof C N R Rao etc.

c) **Interpersonal Intelligence**: This kind of intelligence preferably deals with **the ability of a person to understand & realize other human beings, to interact & to deal with other persons in constructive & convincing manner** (Gardner 1999). Such people are observed good (verbally) communicators, proficient non verbal communicators, they understand emotions & feeling of people, so excellent conciliator, mediator and negotiator. People having this intelligence strongly are- Mahatma Gandhi, Martin Luther, Nelson Mandela, Atalbihari Vajpayee, Ratan Tata, Pranab Mukherji etc.

d) **Intrapersonal Intelligence**: In reverse of the interpersonal intelligence, this type of intelligence relates with **individual’s ability to realize own feelings, emotions and to precise with self-reflections**. These people are having excellent self-awareness, clearly understand the basis for feelings and motivations also they are good to analyze own strengths and weaknesses. Personalities might have this intelligence strongly are- Swami Vivekanand, Dalai Lama, Socrates, Dayanand Saraswati etc.

e) **Visual-spatial Intelligence**: This kind of intelligence deals with **abilities of a person to identify, to memorize the shapes, designs, structures and various graphically sensitive models** (Gardner 1999). People strong in this kind of intelligence are observed as good designers, architects, animators. Personalities would have been strong in this intelligence are- Picasso, M F Hussain, Sir Vishveshvarayya, Walt Disney etc.

f) **Bodily Kinesthetic Intelligence**: This intelligence type mainly relates with **the body control, physical balance & movements, physical abilities** (Gardner
People with such abilities are observed as dancers, gymnast, athletes, firefighters, fishers, drivers where the co-ordination of body parts & movements. People like Milkha Singh, Sachin Tendulkar, Usen Bolt, Pele etc. would possess this kind of intelligence strongly.

**g) Musical Intelligence:** The ability to realize the depth of music, to recognize & mumbling the music tones easily, to understand the tonal & rhythmic patterns are the qualities belong to this type of intelligence (Gardner 1999). Persons strong in this are observed as singers, composers, music directors, music analysts, voice coaches etc. Personalities would be possessing this intelligence strongly are- A R Rehman, Pandit Bhimsen Joshi, Lata Mangeshkar, Ustaad Bismillah Khan, Pandit Hriprasad Chaurasia etc

**h) Naturalistic Intelligence:** This kind is added earliest by the H. Gardner with previous seven intelligences i.e. in 1996 and face the more resistance than others. This relates with the person’s abilities like to understand the nature & its minor reforms, not only having interest in subjects which deals with nature but also having high awareness & better understanding of various species, sensitivity about nature & environment. It involves the skilled discrimination and categorization of natural patterns or material goods (Gardner, 2006). People with these qualities are observed as bird watchers or related works, may be in animal channels, forest & jungle experts biologists, biotechnologists, etc. People like Dr Jagdishchandra Bose, Darwin, Bear Grilles, Salim Ali etc might have been strong in this kind of intelligences.

**i) Existential Intelligence-** Gardner extended intelligence to existential in 1994-95 (Gardner 2003). In his one of the articles for Scientific Americans in 1998 he explained it as "Capturing and pondering the fundamental questions of
existence”. It refers philosophical views of life. It possesses the analytical abilities. People possessing this intelligence are generally found authors, poets and especially thinkers or philosophers. Also people with the strong existential intelligence could be Swami Vivekanand, Dalai Lama, Shri Pramukh Swamiji etc.

In light of the findings of the last two decades, the biological basis of MI theory needs urgently to be brought up to date (H Gardner, 2003). Besides these, the intelligences like Spiritual and Emotional are also added by Gardner with time (Gardner 1999). Also recently Gardner (2004) has proposed two additional intelligences: the mental searchlight, and the laser intelligence. To explain this, he said that “people with high IQ test scores have this "Mental Searchlight" that allows them to scan wide spaces in an efficient way thus permitting them to run society smoothly” (Gardner, 2004). In case of Laser Intelligence he described that- this intelligence permits one to generate the "advances (as well as the catastrophes) of society" (Gardner, 2004) usually associated with the arts, sciences, and trades. In general sense the individuals with a dramatic spike in one/two intelligences are said to have Laser Profiles while those with a broader distribution are described as Searchlight Profiles (Gardner, 2006). We can become more intelligent through study and practice, through access to appropriate tools, and through learning to make effective use of these tools (Perkins, 1995).

2.4.13.2. Criticisms and Issues on MI Theory-

A. The main and basic criticism against MI Theory is delivered by Morgan and other scholars. They believed that each of the seven intelligences is in fact a cognitive style rather than a stand-alone construct (Morgan, 1996). Morgan refers to Gardner’s Multiple Intelligence approach as really a matter of semantics rather
than a new aspect to intelligence which is more similar to Thurstone’s Theory of Intelligences i.e. Primary Mental Abilities. Though Morgan believed the applications & usefulness of MI Theory in education but it does not mean to support the complete rejection of ‘g’ factor i.e. single entity of intelligence.

B. After a decade in 1995 from the publication of his Frames of Mind, Gardner responded to some myths related to MI Theory spread over.

a) The first myth was that as there are seven intelligences, every intelligence type requires a separate intelligence test to measure it. But Gardner vocal about his disdain for a singularly psychometric approach to measuring intelligence based on paper and pencil tests (Lynn Gilman).

b) Another myth was that each of intelligence is similar to domain or a discipline. Gardner explained his definition of intelligence again and distinguished intelligence from a concept of domain which he describes as a culturally relevant, organized set of activities characterized by symbol system and set of operations (Gardner, 1995).

c) The very general criticism over the MI Theory is that it is not empirical. But Gardner (1995) defends its empirical ability very well. He refers to the numerous laboratory and field data that contributed to its development and ongoing re-conceptualizations of theory based on new scientific data.

d) Scholars with traditional psychological views to intelligence argue that MI Theory is not compatible with ‘g’ factor. Gardner justifies MI Theory on the basis that ‘g’ has scientific place into the theory. But he is interested to understand intellectual processes not explained by ‘g’ Theories.

e) Also there is an issue related to the incompatibility of the MI Theory with genetic and environmental factors of nature of intelligence. In defense of it
Gardner argues that MI Theory is largely concerned to interface between genetic and environment to realize intelligence.

f) Scholars also argue that in MI Theory Gardner extended the definition of intelligence beyond utility. To which he responds passionately that the earlier and narrow definitions are equal to scholastic performance which is more constrictive. According to Gardner, MI Theory is about the intellectual and cognitive aspects of human mind. He also point out that MI Theory is not a theory of personality, morality, motivation or any other psychological construct (Gardner, 1995).

g) John White on other side argued over the criteria that Gardner employs in MI Theory. The questions to the individual criteria like ‘do all intelligence contained symbol system?’ & ‘how this criteria is to be applied?’ are rose by him. Gardner also admitted to this that there is an element which is subjective and involved in to theory.

Beyond all these criticism and issues or arguments from various scholars, Gardner says that other psychologists really think of intelligence as ‘Scholastic Capacity’ while he is trying to expand the notion of intelligence to extend to all manner of human cognitive capacities. According to Gardner the idea of Multiple Intelligence has considerable appeal across the disciplines. Also he states that aspects of MI Theory are compatible with propositions put forth by other theorists and it is possible that to have rapprochement between MI Theory and other competing theories.

2.4.13.3. Applications of MI Theory in International Scenario-

Applications of MI Theory can be found in schools of six continents (Korn Haber, 2004). Researcher here presents a scenario in selected countries as follows-
A. China-
China realized the fruition of Multiple Intelligence and applied it to reform their education system. Gardner visited China severally since 1980. His book ‘Framess of Mind’ was published in Chinese in 1990 & ‘MI: Theory in Practice’ was in 1999. Many projects were undertaken by the National Education Association of China on using Multiple Intelligence to develop students’ potential. Government started a nationwide awareness campaign of ‘Outline of Curriculum Reform for Compulsory Education’ since 2001 to spread the use of Multiple Intelligence, which got wide acceptance from parents, educationalists, industrialists, top politicians etc. Since then, more than 100 books on MI Theory and its applications were translated in Chinese and all these books found huge popularity in country. Chinese people from schools, parents, government levels embraced MI Theory & its influence has spread throughout the country by presentations, conferences & other measures. During 1993-2003 China undertook the campaign of ‘Education for 1.3 billion students in 10 years of education reform & development’ which was successful. They are getting its fruits through developed & specialized potential among their students. They now spread ‘Character Education’ term by using Multiple Intelligence for upgraded educational reforms. There is no official record of how many Chinese schools use MI theory as a guiding principle for curriculum reform. As large number and wide geographical spread, the task is not practical. For example, in the Shan Dong province alone, approximately 400 schools have participated in MI-related curriculum experiments (Jie-Qie-Chen, 2006)

B. Turkey-
The Turkey was firstly acquainted with the concept of Multiple Intelligences in 1990s. Then translations of international books on MI were taken place. This
helped Turkish to study and to understand this new concept. Education reformists from Turkey invited the experts on MI from foreign countries. In addition, a few Turkish researchers such as Dr. Selcuk visited and observed the MI implementations in American classrooms, and talked to MI teachers and principals in these schools about the outcomes of MI theory (Kaya Osman, 2006). Then with the initiative taken by some reputed schools of Turkey, MI started to influence Educationalists, experts and many government representatives to accept it.

With the experiment done in 1998 regarding the usefulness of MI theory in education, Dr Selcuk succeeded to inculcate its emphasis in Turkey. Results of it in 2003 he became chairman of Turkish Board of Education and new education reform begun in Turkey. He started concept of K8 classrooms based on Multiple Intelligence Theory during 2003-2005.

The MI efforts have become one of the most comprehensive reforms carried out in the last 60 years in Turkey (Kaya Osman, 2006). Besides this involvement of teachers from country overall was initiated through construction of new text books, workshops, trainings and summer institutes. Then, these courses were supported with National TV Channels, video recordings and nationwide publications, so that everyone should be aware with the usefulness of MI in education to develop human resource with better employability. As a result of this reform, not only teachers and university educators but also students and their parents became more aware of MI Theory and its practice in the Turkish educational context (Kaya Osman, 2006).

C. United States of America-

As in 1995, the school dropout ratio increased up to 12% as schools didn’t meet their needs. The need of such education system which may train students by
understanding domain of their interests emerged. By being an Advocate of education reform in **Gardner** followed by many educators during 1990s came with a new education system based on his Theory of Multiple Intelligences. Through discussions countrywide, his theory became popular. Dover Elementary School in Dover, Florida began to apply MI in 1990. Their high minority low-income school reduced discipline referrals from 400 to 13 and their standardized test scores **improved from the 30th percentile to the 50th percentile**. With such initiative large number of schools adopted this concept. With further research, the use of this approach found useful for college students and adult learners. Besides much criticism, the theory got its importance in education system. The use of MI Theory Approach in education, it encouraged children to use their best potential to have more success. Now, it’s a widely used approach in education system mainly of **North America**

**D. Hong Kong-**

Like others, in Hong Kong also, a need of specialized education system led to acceptance of Multiple Intelligence Approach in education system. The wave of curriculum reform in Hong Kong in 2000 resulted in the campaign of ‘**Learning to Learn**’. In learning to learn, as specified in the consultation document, students are provided with five learning experiences in the areas of **moral and civic education**, **intellectual development**, **community service**, **physical and esthetic development**, and career-related in and outside regular classrooms throughout the stages of schooling (David Chan, 2007). To meet these needs they used MI Theory Approach. With the initiatives and active involvement of teachers of all classes they developed interdisciplinary curriculum which was **theme-based teaching** integrated to eight intelligences from MI Theory. Also, Lesson Plans were
developed according to the same. Rather than teaming based on content areas, "intelligence teams" in which each teacher member of the team identifies his or her intelligence expertise can be formed to assume responsibility for specific intelligences in lesson planning or daily instruction (David Chan, 2007). The Education Commission in Hong Kong emphasized the life-long learning with better career development among students. Learning, teaching, and assessment through multiple intelligences provide insights into this new wave of curriculum reform in Hong Kong (David Chan, 2007).

E. Indian Scenario-

In India, the use of this concept is less popular. It started to spread its feet in country slowly but the scenario is less satisfactory. Not because of its adaptability but it is due to lack of awareness of education reformists & government representatives. The little research over this concept is also a matter of concern in India. Very little material is available from India to contribute this concept of specialized learning. The concept is limited to some schools in metropolitan cities like- Bangalore, Delhi, Mumbai, Ahmadabad, and Chandigarh. Even there as well, it is being used for primary school children. The research must have to be applied throughout education system from KG level to college level for a certain adequate period then it will be fruitful. As we discussed above, the government representatives of various countries took initiatives to reform their education system. In India government is just giving emphasis on quantity of degree holders but it doesn’t have enough attention over the quality of education being provided to them. Due to that we have ample of degree holders without proper career goals those blindly run behind the degrees only. There is a severe need to develop this concept for education reform in India.
Perhaps the reform does not wait for someone, it takes place with time. In India the **Institute of Multiple Intelligences** has four offices at Mumbai, Ahmadabad, and Kolkata. Recently one is launched in July 2012 at Chandigarh. **This Institute is run through American Psychological Association.** It has **Dermatoglyphic Analysis System** for teaching-learning process. This system is adopted by 700 schools in **Maharashtra & Gujrat** (Indian Express Article- 26th July 2012). Also one institute in Gurgaon (Haryana) called, **School of Inspired Leadership (SOIL)** which is founded in 2008 runs program of One year’s Executive Training Course. **The curriculum of this course is being designed by 32 leading companies** and not by the academicians. Again, **they first assess students’ abilities through Multiple Intelligences which help to understand the students’ trend to the specialization they have to choose.** This practice helps students, faculties and corporate to understand and to impart required skills and competencies into the students for better career planning. **Researcher wanted to propose same practice for higher education like MBA for better career planning.**

The above description in various countries supports the utility and need of MI Theory in educational reforms in various parts of the world. According to one report, schools implementing a MI based curriculum noted particular improvement in student behavior test scores and parental participation in effort, motivation, social involvement and learning of children with disabilities as well (Korn Haber, 2004). MI Theory has not just been incorporated into elementary and secondary school curricula but also implemented in adult literacy educations where it appears to encourage the development of effective individual learning strategies (Kallen B. & Vien J., 2004). Besides this, research conducted on second language students revealed that students taught using MI Theory outperformed controls on assignment of oral and written
language proficiency (Halley, 2004). MI Theory doesn’t condone teaching every lesson through all eight intelligences; it does emphasize the importance of presenting a topic in variety of relevant ways (Gardner, 2006). According to Gardner (2006) MI Theory encourages the adoption of a personalized approach to each student and careful cultivation of socially valued skills.

Now after twenty five years Gardner accentuates two primary claims through MI theory that-

a) All individuals possess the full range of intelligence- the intelligence are what define the human beings, cognitively specialized.

b) Individuals not even twins exhibit precisely the same profile of intellectual strengths and weaknesses. (Sternberg R J & Kaufman, 2011).

2.5. CAREER & CAREER PLANNING-

Today our youth is seemed worried for their career in future. For them the career is only doing an available job. They are not so aware about the wide meaning of the term ‘Career’. They don’t consider the various aspects of career viz. entrepreneurs, politics, businessmen or many others. So here researcher gives clear idea of both the terms.

Job: The job means any type of course of action or series of courses of action offered by individual towards an individual or an organization and get something (they desired for) in return of it.

So from above definition, it is being cleared that the job is the course of action we offered to get something we desired. Suppose, someone working as ‘Sales Officer’ for one organization switch over as ‘Production Supervisor’ for other. Here he is just switching the job but it is not his career. Now the curiosity rises, what does the career mean?
Career: it is a sequence of separate but related work activities that provides continuity, order and a meaning in a person’s life. (Luthans, 1981)

From the above definition we can get that Career is one’s Chosen Profession for his life which requires a willingness to get the training needed to build your skills for the future. With this aspect, one may switch over from one job to another but the jobs are related to each other and the new one is more enriched than previous one e.g. one working as ‘Sales Officer’ switch over to ‘Business Development Officer’ in other organization. In above illustration, though the job descriptions changes but the second job has wider scope than that of first one. There are various stages involved in this ‘Career’ terminology. There are two aspects of Career i.e. Organizational Centered and Individual Centered. In this research researcher focuses on the Individual Centered Career and related aspects only.

2.5.1. Stages under Career-

Primarily, there are three important stages in one’s career like Growth, Maturity & Declining.

- **Growth**-
  
  It includes **Exploration** & **Establishment** of one’s career. Where his productivity is low but gradually it increases with increasing experience. At this stage, the value of money exceeds value of time. Generally, this stage lies during the first ten years of one’s career path.

- **Maturity**-
  
  This stage is at the middle of one’s career; where his productivity on the job is at its peak. Here, money value equalizes value of time, but gradually the time value increases. It covers maximum span of one’s career i.e. around twenty years.
• Declining-

Here, the career is at the retirement phase where the productivity of an individual is lower. But with the help of extensive experience, one can exceed the value of time than money. Generally, this stage covers last ten years of one’s career.

Diag. 2.5- Career Stages-

(Source: http://www.okuji.net/images/CareerStages.jpg&w=625)

2.5.2. Career Planning-

After realizing the Career and its Stages, let’s discuss the concept of Career Planning in detail.

It is not just the short term planning done to get a particular job. It is the lifelong process which contained various steps. It covers a journey from choosing desired occupation (in which one has interest & ambitions), then gaining the required competencies, to get the first job, to grow in the job with the related practical experiences, facing surprising turns in career and at last the plan of retirement.

The Career Planning is also defined as “A continuous sequence of activities & actions one takes to achieve his own career goals.” The more effective is Career Plan, better the Career Achievements.

To make the Career Plan more effective, there is a process should be designed for it. This process is important from the point of view of employee & also for the
Immediate Superiors & Top Management. This process helps to create win-win situation in organizations. As the employees look towards this plan as a way for better pay & positions, the employers view it as retention & motivational tool to achieve the target of productivity upliftment and top management look it as a tool for effective succession planning. As shown in following diagram, the Career Planning Process can create win-win situation for all of them. And through this, mutual goals can be achieved.

![Diagram 2.6 - Career Planning Situation](Source: http://www.best-career-match.com/intelligences-boosting.html)

2.5.3. Career Planning Process:

Generally, the Career Planning Process (Career Decision Making Process) is having following four phases:

![Diagram 2.7 - Career Planning Process](Source-Created by Researcher)
a. **Self Assessment**- This phase deals with the assessment of own self interests, abilities & competencies. One should know his own desires, aspirations and needs. This can be achieved by the realization of strengths of own cognitive abilities in different areas called ‘Intelligence Domains’ i.e. Multiple Intelligences. By knowing the strong areas of intelligences, one can attain the required skills, knowledge.

b. **Analyze Career Opportunities**- After assessing the self cognitive abilities and competencies, one has to think about relevant career opportunities matching with them. It also includes the study of desired career opportunities and their requirements like necessary training, related courses, available alternatives etc.

c. **Relevant Experience**- When one decides to choose particular Career Option, then it is necessary to earn relevant field/practical experience to enter in that field. It can be done by going for Internships, attending related conferences & participating in Seminars, discussions with the experts & experienced people in that field. **It is called Bridging the Gap between one’s Career Desires and Career Opportunities.**

d. **Desired Job**- After getting enough relevant practical experience, one must to go get his desired job. This can be done through extensive job search, preparation of strong & good resume, by increasing network & through good referrals.

This process doesn’t end by mere achieving desired job; it further begins with higher ambitions, aims than previous. But it should also be correlated with the career stages discussed earlier in this chapter. This process is comprised from two models of career planning viz. Waterloo University Model and SODI Model for Career Planning.
2.5.4. Factors Affecting Career Choices-

When any person chooses a stream, a specific course or job to make his/her career, it is a result of variety of factors. These factors affect the career choice/selection of an individual. Normally there are any of the following three important factors behind one’s career selection-

a. **Personality Factors**- while selecting the career it is important to understand one’s interest in it. Along with that the personality factors like individual’s intelligence, cognitive abilities in various areas (Multiple Intelligences), knowledge, willingness and attitude etc. An individual selects a career which matches to these personality factors. People selecting a career by getting influenced by these factors usually found satisfied with his career selection for long term.

b. **Opportunity Factors**- besides personality factors an individual get influenced by the opportunity factor i.e. the availability of career options in certain areas. The individual goes for those career options which can give him easiest opportunity to do job i.e. to earn. The people being influenced by these factors are usually found satisfied with their career selection till it satisfies their needs like pay and packages. Their satisfaction does not sustain for long term.

c. **Environmental Factors**- alike above two factors this factor also can influence one’s career choice. It may comprise with factors like Government Policies (specifically educational and employment policies), Domestic as well as International Labor Market situations, Employment Generations in various sectors, Family Affiliations, Social and Cultural Norms etc.

These three factors affect the career choice of an individual. When any one chooses any career option, it is found influenced by any of above three options. It is good to see the effect of Multiple Intelligences on career choices.
2.6. MULTIPLE INTELLIGENCES & CAREER CHOICES:

After realizing the career planning process, it’s necessary to understand the different career choices. One can get the better realization of his own strengths in different Intelligences. The skills & abilities required for various careers & occupations can be correlated with basic eight intelligence domains mentioned by Gardner in his MI Theory. So, the career options available under the particular intelligence are given below:

Table No. 2.3-Table showing Multiple Intelligences and Career Options

<table>
<thead>
<tr>
<th>SN</th>
<th>Intelligence type</th>
<th>Career Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Linguistic</td>
<td>Attorney, Communications specialist, Editor in publishing, Journalist, Librarian, Newscaster, Politician, Talk-show host, Language translator</td>
</tr>
<tr>
<td>2</td>
<td>Logical-Mathematical</td>
<td>Accountant, Computer analyst, Computer programmer, Engineer, Mathematician, Physician, Researcher, Statistician</td>
</tr>
<tr>
<td>3</td>
<td>Interpersonal</td>
<td>Actor, Communications manager, Conflict resolution specialist, Dental hygienist, Human resources manager, Nurse, Politician, Religious leader, Social worker, Trainer facilitator</td>
</tr>
<tr>
<td>4</td>
<td>Intrapersonal</td>
<td>Actor, Consultant, Futurist or trend predictor, Program planner, Psychologist</td>
</tr>
</tbody>
</table>
2.7. MULTIPLE INTELLIGENCES AND A SUCCESSFUL CAREER-

From the above discussions, it becomes easy to realize that the Multiple Intelligences play a vital role in self assessment and can provide a guideline for effective career plan. And, **if one strictly implement the prepared career plan with effective control, his career may term as a Successful Career.** The researcher tried to design the path of Successful Career through the Multiple Intelligences, which is

<table>
<thead>
<tr>
<th>5</th>
<th>Visual/ Spatial</th>
<th>3D modeling &amp; simulation, Artist, Engineer, Graphic artist, Photographer, Navigator, Pilot, Strategic planner, Urban planner</th>
<th>Architect, Computer programmer, Film animator, Interior decorator, Mechanic, Outdoor guide, Sculptor, Surveyor, Webmaster</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Musical</td>
<td>Audiologist, music camp counselor, sound editor, music publisher, music therapist, Composer, singer, Speech pathologist</td>
<td>Disc jockey, Music critic, Music librarian, Music teacher, Musician, Recording engineer, Lyric</td>
</tr>
<tr>
<td>7</td>
<td>Bodily Kinesthetic</td>
<td>Actor, Carpenter, Computer games designer, Firefighter, Forest ranger, Mechanic, Phys Ed teacher, Recreation specialist</td>
<td>Athlete, Craftsperson, Dancer, Yoga instructor, Jeweler, Personal trainer, Physical therapist, Surgeon</td>
</tr>
</tbody>
</table>

(Source: http://www.teachervision.fen.com/intelligence/teachingmethods/2175.html#ixzz1cnfYK4i2)
shown in following figure. Through this figure we can understand that if a proper career plan is prepared by assessing self abilities reflected through various Multiple Intelligences possessed by an individual.

![Diagram 2.8- Successful Career through MI](image)

(Source- Prepared by Researcher)

2.8. MULTIPLE INTELLIGENCES & MANAGERIAL COMPETENCIES-

When it comes to organization’s success, it depends on the people who drive it. It is being said that ‘Swords cannot win battles; the strong hands behind them win’. It simply means that when any of the **organizations get success, it is due to people who took efforts, gave their competencies to achieve the organizational goals and objectives**. So, mostly the organization can better be run by its managers who handle all the resources including human workforce effectively. They are managers who develop strategic plans, implement them through organizing available resources, lead workforce to proper direction and motivate them and surpass all the hurdles in the way of attainment of goal. It happens, only if the managers of that organization are
competent enough. The organization having such managers has the competitive advantage over the others. Also as mentioned in previous chapter, from one article in Economic Times (25th Sept 2013) it is observed that organizations which have qualified managers like MBA, have competitive advantage and are running better than those which do not have such. It supports the role of competent managers in the organizations.

Because of such things organizations expect more from the MBA graduates. They perceive that these qualified MBA graduates are equipped with all those required skills and competencies which are essential for the position called manager. Because they think that these graduates have gone through two years of professional Post Graduate program. But it is now observed that such expectations are not seemed to be fulfilled because many of these MBA graduates do not have any idea of the required competencies to execute the duties of job positions. Also many institutes through which they come also do not have such system. So, it becomes very essential to know about Managerial Competencies required in the organizations or at workplace.

According to Wu, Lee and Tzeng (2005) no single Managerial Competency model is fit in all type of organizations. Also according to Joyce Martin (2001) these required Managerial Competencies are not same in every organization. Such competencies depend on various factors. He derived following three criteria for different competencies in different organizations.

a) Products & Services of the Organizations—As per the product and services provided by the organization the competencies required for their managers can be different. e.g. the manager at automobile organization must possess some different set of competencies than manager at IT industry.
b) Authority Level and Scope of Operations - As level of managers changes, the required set of skills and competencies also change. Wu, Lee & Tzeng (2005) developed such sets of Managerial Competencies for different levels of management. e.g. Lower Level manager must possess technical and operational competencies more than that of Top Level manager while Top Level manager must possess conceptual, analytical and strategic competencies more than Lower Level manager.

c) Nature of Responsibilities - Also according to Joyce Martin (2001) the required Managerial Competencies may change as per the nature of their responsibilities on the job. If the responsibilities and accountabilities are more, more the competencies are required to execute them.

But, today, all the managerial operations become so complex and interdependent that it becomes so difficult to clearly separate out such required skills and competencies for managers. Now, corporate needs versatile and multi-competent managers in organizations to work. With increasing globalization and technological advancements the nature and structure of the corporate seems to be more complex in future and the need of managers with multiple competencies too.

As we have seen earlier in this chapter, these competencies are nothing but the cognitive abilities of an individual. According to H Gardner (1993) these cognitive abilities called as intelligence domains. Such variety of intelligence domains is present in an individual which he called Multiple Intelligences. So when we talk about competencies for managers we talk about the intelligence they require in specific domain. In this way the Managerial Competencies are found related to Multiple Intelligences. As the MI level of managers is higher, stronger the competencies they possess in specific skill areas or domain. This relation between
Managerial Competencies and Multiple Intelligence can be more clarified through further explanations-

Table No-2.4 - Table showing relation between Managerial Competencies and MI

<table>
<thead>
<tr>
<th>Competency</th>
<th>Managerial Aspect</th>
<th>Multiple Intelligence Aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>It comprises <strong>written &amp; oral communication</strong>. Every manager has to communicate at lateral or vertical level &amp; effective communication is key competency for him.</td>
<td>This competency deals with <strong>Linguistic Intelligence</strong> domain which every manager should enhance. More the Linguistic Intelligence, more the manager can effectively communicate.</td>
</tr>
<tr>
<td>Analytical Thinking</td>
<td>When we say Analytical abilities it comprises to <strong>identify logical flaws</strong> behind the things happening around. Also the <strong>statistical and numerical understandings</strong> are essential.</td>
<td>This competency deals with the <strong>Mathematical/Logical Intelligence</strong> which is very essential for every manager from any of the functions like HR, Finance, Marketing or others.</td>
</tr>
<tr>
<td>Leadership &amp; Motivation</td>
<td>Every manager must have to play a role of leader while getting things done from his subordinates or team. <strong>He has to lead and motivate</strong> his team members for attainment of desired goal. For that he must know the ways to deal with people with various kinds &amp; their thinking patterns. Besides this he <strong>requires keeping himself calm, stress free and keeping balance between work and life.</strong></td>
<td>It is the competency which makes a real manager. It deals with the <strong>Interpersonal, Linguistic as well as Intrapersonal Intelligence</strong> domains. It helps manager to execute his role as leader and motivator. It also refers to <strong>Musical and Naturalistic</strong> domains which can help him to enhance his Intrapersonal Intelligence.</td>
</tr>
<tr>
<td>Competency</td>
<td>Managerial Aspect</td>
<td>Multiple Intelligence Aspect</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td><strong>Decision Making Ability</strong></td>
<td>This is the competency that makes an individual a real manager. It requires <strong>conceputal skills, realization of causes and consequences of decisions, analytical</strong> as well as strategic thinking. To take the right decision at the right time is the key for successful manager.</td>
<td>This kind of competency strongly deals with the <strong>Mathematical/Logical Intelligence</strong> as it needs to conceptualize, to forecast and to predict things correctly. Also it deals with <strong>Intrapersonal Intelligence</strong> in which conscious self can take more correct and quick decisions.</td>
</tr>
<tr>
<td><strong>Problem Solving Ability</strong></td>
<td>While managing various kinds of resources several problems occur daily. A good manager has to be equipped with such quality to identify &amp; to understand the problem, the cause-effect relationship of the factors related to problem.</td>
<td>This kind of competency again deals with <strong>Mathematical/Logical Intelligence</strong> domain. As well as it refers to <strong>Intrapersonal, Visual &amp; Linguistic</strong> domains as they help manager to identify, to understand the problem correctly and to communicate it effectively. Because effective exchange of correct information solves half of the problems.</td>
</tr>
<tr>
<td><strong>Physical &amp; Mental Fitness</strong></td>
<td>With increasing complexity of managerial functions managers have to perform various kinds of roles in the organization. For that they must be <strong>physically and mentally capable</strong> enough to handle such task. To get this managers must go through the various techniques like for <strong>physical health-exercise, Gardening, Gym</strong> etc. and for mental health- <strong>yoga, meditation, keeping mind relax</strong> etc. By doing this they can execute their duties effectively.</td>
<td>This kind of competency deals with <strong>Bodily-Kinesthetic, Intrapersonal, Visual, Musical and Naturalistic Intelligences</strong>. Where Bodily-Kinesthetic intelligence can motivate managers to go through physical exercises, aerobics and gym, Naturalistic Intelligence can relax him through gardening or keeping pets while Intrapersonal, Visual &amp; Musical Intelligence can help to pursue his hobbies, to be calm, stress free and to keep self control.</td>
</tr>
</tbody>
</table>

(Source: Prepared by Researcher)
These are the six basic competencies required for every manager. Also in their research paper, N K Dubey, S Goyal and others found 12 such competency factors for managers which comprises above six competencies. From above, one can realize the relation between Multiple Intelligence and Managerial Competencies. Managerial Competencies are made up of intelligence domains mention in Multiple Intelligence Theory of H Gardner (1983). Higher the MI Level of the manager more the strong competencies he possesses which increases his acceptability and value in corporate.

2.9. SOME OTHER REVIEWED LITERATURE-

2.9.1. Books:

a."Frames of Mind: The Theory of Multiple Intelligences" (Gardner, 1999)-

Simply put for here the Gardner proclaims that our mental abilities were not sole or fixed but that we possessed a blend of cognitive competencies that produced a unique intellectual profile. His distress with the typical view of intelligence initially arose from his long research with talented children and with brain damaged adults. After that he redefines the term “Intelligence” with his own aspects and also categorized this term in eight intelligences viz. linguistic-verbal-a language based competence requiring superior listening, speaking, reading and writing skills, logical-mathematical-dealing with abstract concepts, patterns, and symbols required for deriving scientific proofs, visual-spatial-utilization of mental imagery for discerning orientation in space, bodily-kinesthetic-using physical body movements to express emotion, musical-recognizing tonal and rhythmic patterns and creating harmony, interpersonal-the ability to read the moods, motivations and mental states of others, intrapersonal-intrusive-an ability to access one's own
feelings and to draw on such feelings to guide one's behavior and naturalist-environmental-recognition and categorization of natural objects.

b. “Intelligence Reframed: Multiple Intelligences for the 21st Century” (Howard Gardner 2003)- In this book Gardner introduces the possibility of three additional candidate intelligences: moral, spiritual and existential. Also, he emphasized questions related to recent myths and issues related to the theory of MI. Here he is describing and justifying "the ways in which MI theory can be applied to scholastic and "wider world" settings and how others have successfully implemented MI.

c. E-book-Multiple Intelligences Revisited (Rolf Palmberg 2011) - In his ebook, Rolf Palmberg discusses the concept of MI for EFL(English as Foreign Language) and Logical-Mathematical Intelligences specially. This ebook is actually a revised form of his previous two ebooks related to the same topic. He proposes the importance of MI in teaching-learning process. To specify the concept he discusses the characteristics of learner and methods to identify the MI of teachers as well as learners. This book provides guidelines to teachers for teaching EFL and Logical-Mathematical concepts through various exercises proposed by author in this e-book. He further proposes a SAFER teaching model based on MI for better teaching-learning process. At the end he suggests some exercises for the above purposes along with the solutions.

d. SQ-The Ultimate Intelligence (Danah Zohar & Ian Marshall 2000)- This book is a successful attempt to propose scientifically the existence of Spiritual Intelligence proposed by H Gardner in his theory of MI. Authors discuss the different manners in which it can be recognized and identified. Besides that, they say – it is beneficial to build the bridge the communication between reason-
emotions and mind-body. Further, they propose the high degree of self awareness, the adaptability for different situations and to find out the relations among various diversified elements in the surrounding as well as situations.

**e. Multiple Intelligence- The theory in Practice (Gardner, 1993)**- In this book, there are 13 chapters divided in four parts. In Part I author proposes the seven intelligences instead of one-dimensional approach to calculate intelligence score. The concept of these seven intelligences (Linguistic, Mathematical/Logical, Spatial/Visual, Musical, Bodily Kinesthetic, Interpersonal & Intrapersonal etc.) he called as Multiple Intelligences. He says that all of us have combination of these seven intelligences. Then he describes all of them in detail to make them easy to understand. He establishes the relation between Intelligences & human capabilities. He also clarifies the doubts on his theory. In Part II he proposes the education of these intelligences & future school reforms through MI. In Part III, he proposes the components of MI & how to assess them. He suggests that all these topics in schools & colleges should be taught by various ways so that the students with different strong Intelligence areas can understand it very well. In Part IV he hopes for better future to this concept of MI & expects more studies over the same.

**f. Personality & Intelligence (Sternberg R. J & Ruzgis P, 1994)**- This book represents the contribution of Cattell, Eysenck, Haslam, Baron and many other psychologists. Authors of this book edited all the work done by these experts in relevance of Personality and its relation with Intelligence. In its five parts, authors explain the integrity of Personality and Intelligence. Authors describe the role of intelligence in the development of one’s personality. They also portray that the intelligence is not a single thing but a multifaceted. This book provides the relation of Personality and Intelligence with the culture which led to new approach of
Personality-Intelligence dichotomy. Then it also deals with anthropology, morality and emotional intelligence of a person which plays vital role in one’s personality development.

g. Measuring Intelligence- Facts & Fallacies (David J Bartholomew, 2004)- Author of this book tries to explain some facts and some misconceptions in the concept of Measurement of Intelligence. He explains the concept of IQ and how to measure it. Then he describes the Spearman’s Factor Analysis for Measuring IQ. He also explains the criticism on IQ as intelligence is what IQ Tests measures. He then throws light on concepts like g-Factor, Thurston’s Multiple Factor, Wechsler’s Adult Intelligence Scale (WAIS) and Cattell’s Crstalized & Fluid Intelligence. Author explains the views of Gould with his five points and Howe’s Twelve Facts of intelligence which open another side of the concept of Intelligence.

h. Intelligence & Ability (Stephen Wiseman, 1973)- This book is an overview of the journey of intelligence concept. Firstly, author explains the pioneer work of Galton, Spearman, Kelley and Thomson in the field of intelligence. Then he throws light on the structure of human mind and its complications with the help of work done by Vernon, Burt and Guilford. Further he explains the interesting concept in the intelligence and ability i.e. Nature Vs Nurture to describe the role of environment in the development of one’s Intelligence. Then he tries to explain the relation between theoretical & practical views on intelligence with the work of Cattell, Jensen & Eysenck. After that he describes some cross cultural studies done by Jensen, Lesser & Vernon in relation with the concept of intelligence. In last part he describes the contributions of Ferguson and Hunt on the wider implications of intelligence.
i. **Career Development & Career planning- A Guide for Managers, Trainees & Personnel Staff (Malcolm Peel, 1992)** - Author of this book explains the concept of Career Development & Career Planning in detail. He explains the phases of career developed by Healey as- Growth, Exploration, Establishment, Maintenance & Decline. Then he describes what managers, trainees and personnel staff can do for the career development of workers of a firm. Further he explains how career choice gets influenced through factors like family, society, educational experience and others. Lastly, he describes the problems generally occurred in one’s career which are individual problems or collective problems. Further he provides some measures to avoid and to solve those problems.

j. **Using Multiple Intelligences in Choosing a Career (Thomas Armstrong, 2000)** - In this book Armstrong suggests that we can provide help to students, in choosing a career as per realization of their own intelligence areas. He first gives idea about MI Theory then how our intelligence can be our guide for career choice.

**2.9.2. Research Papers**-

a. **A study of MI; Foreign languages success & some selected variables (Aysel Saricaoglu & Arda Arikam, 2009)** - In this paper, authors try to explore the types of intelligence possessed by students to learn the foreign language. For this, they used the various techniques to collect the data from students & analyzed it through SPSS 15. They found that Logical/Mathematical Intelligence is mostly found among the sample students while Musical Intelligence found least. They also found that the factors like parents’ education create impact on MI level. The Logical/Mathematical Intelligence found good in male while Intrapersonal & Linguistic Intelligence found
good in females. Finally they suggest that giving emphasis on grammar based models for foreign language teaching-learning process.

b. Teaching Strategies Based on MI Theory among Science & Mathematics secondary school teachers (Tajularpin Sulaimom & others 2010)- This paper is an attempt to emphasize the role of MI in identifying the potential intelligence of teachers. Authors say that if teachers get the idea & potential strengths of themselves in science & mathematics, they can apply them in their teaching. Authors found that the MI helps teachers to improve their teaching of Science & Mathematics. Also they suggest that relation between intelligence & teaching-learning process should be base for higher academic performance & lifelong learning as well. There is significant difference between the teaching strategies of teachers applied mostly with Logical/Mathematical & Musical strategies which are rarely applied for the same.

c. The Role of workers’ MI on their Productivity in Cultural Intelligence of Moghan (Qader Damirchi, Gholmreza Rahini & Hossein Seyyedi, 2011)- This research paper is an attempt to show relationship between the MI & Productivity of workers with the help of basic eight MIs proposed by Gardner. Authors framed eight hypotheses for study & they found that there is 52.27% variation in productivity due to the MI & so relation between these two has been proved. With the help of various statistical tools they found that the variation in productivity is higher for Musical Intelligence & less for Intrapersonal Intelligence. Their research concludes that the MI plays vital role in productivity of employees.

d. Role of Career Competencies in Organizations (Malikesh Beheshtifar, 2011)- In this paper author tries to propose the role of career competencies in the organization & to find those competencies & skills important to work effectively in
organizations. For this he studied various career competency models & also suggested some competencies which are required in organizational performance. He found that Career Competencies are different than technical & managerial skills. He also found the competencies important for career in organizations. Author suggests that to improve performance in organization one must assess his competencies & potentials.

e. Multiple Intelligence & Adult Learning: A Review of the Literature (Trenton R Ferro, 1999)- Author of this Research Paper tries to find out the extent of applications of MI Theory in adult education. For that he provides the analysis of various writings & actual researches in this aspect. He found that, the actual research done on this issue is little. He also found that Shearer & Jones through their HAPI (Hillside Assessment of Perceived Intelligences); Shearer through MIDAS have done some analytical research on this subject. While Jean, Quinones & Conwell, Kallebach & others have done something on Action Research related to MI & Adult Learning. Through this extensive research based on qualitative approach, he found that all researchers whose work & writings he studied for this purpose agreed that the MI Theory can be applied in adult students’ Education & Learning Processes. He further states that there is much room for researchers to do research on better understandings of adult students’ MI & to provide suggestions for their better learning.

f. Fostering Study Skills, Attitudes & Habits among Students using Multiple Intelligence Approach (Rajlakshmi M S & Suresh K P, 2011)- Through this Research Paper authors try to throw a light on the important concept that the MI Approach can be found very beneficial to understand student’s potential in specific area which can again be improved through specific & properly designed Teaching
Program. They carry out the Pre-Program & Post-Program Survey on MI & found significant difference between both; they suggest that instead of Traditional Teaching Methods, the MI Approach can be helpful for students’ development in life & in their career as well.

g. Self Perceived Multiple Intelligences of Male & Females (Gulap Shahazada, Dr Safd & others, 2011)- In this Research Paper authors try to show the differences of the self perceived MI between male & female college students. They propose that there is difference between the levels of MI of Male & Female Students of Pakistan. They found that female students scored more than male students in most of the Intelligences. Female students are found ahead in Linguistic, Visual, Interpersonal & Intrapersonal Intelligences while male students are ahead in only Mathematical-Logical Intelligence. Authors suggest that male students should improve their other intelligences but does not provide any means or measure to do the same.

h. A Comparative Study of the Relationship between MI & General Self Efficacy (GSE) among Public & Private Organization in Maragheh (Mohd. Reza Noruzi & Gholam R Rahimi, Sept 2011)- Authors of this paper try to show the importance of MI in improvement of self efficacy & in making employee compatible to face any situation successfully. They selected employees of two organizations for this purpose. By applying various statistical tests on the collected data through structured MIDAS MI Test, they came to conclusion that in both the organizations the MI & GSE plays vital role in employee development. They suggest some measures like- to conduct seminars, workshops, trainings, also through the superiors’ support for the same.

i. Difference between Self Perceived MI of Urban & Rural School Students (Gulap Shahazada & others, 2011)- In this paper the authors try to throw the light
on the difference of MI among Urban & Rural Students through which they show that the environment impact level of MI. They carried out research on school students & found that the Urban Students are strong in Linguistic, Logical-Mathematical & Intrapersonal Intelligences. While there is no significant difference they found in Visual, Interpersonal, Musical, Bodily-Kinesthetic & Naturalistic Intelligences among Urban & Rural School Students.

j. Mother’s Education & Student’s MI (Gulap Shahazada, 2011)- Through this paper author tries to show that the mother’s education created impact on the level of MI of students. He says that there is significant relation between these two variables. Educated mother plays a vital role in the improvement of intelligence level of students. He found significant relationship between mother’s education & student’s Linguistic, Mathematical intelligence. But the same is not found regarding Interpersonal, Intrapersonal & Naturalistic Intelligences. He further recommends the attention and awareness of this fact must be spread among society as it affects Multiple Intelligence level of students.

k. Multiple Lenses on the Mind (H Gardner, 2005)- In this research paper author describes how mind is organized & through that he introduces the concept of Multiple Intelligence. Further he proposes the reasons for success/failure of leaders to change the other’s mind. He relates all these reasons to each of intelligence type, he proposed in his Theory of Multiple Intelligences. Then he proposes the future patterns for mind. For that he suggests five minds- Disciplined Mind, Synthesizing Mind, Creative Mind, Respectful Mind and Ethical Mind. He also recommends special efforts should be taken to develop these minds.

l. Research on MI Teaching & Assessment (Jingchen Xie & Ruilin Lin, 2009)- Authors of this paper try to explain the importance of MI Approached Teaching
over traditional teaching methods. They carried out their research on people of various ages divided in two groups i.e. Experimental Group & Control Group. For Experimental Group the MI Based Teaching was provided & Traditional Teaching Methods to Control Group. Through Pre-Experimental & Post-Experimental MI Test authors found that MI Based Teaching methods help students to improve their technical knowledge & intelligence in various areas. They suggest that teachers as well as learners should give equal attention to MI Approach in Teaching-Learning Process for making it more effective and more successful.

m. Successful Intelligence- Finding a Balance (Robert J Sternberg, 1999)- In this research paper author tries to find out the middle ground between the two extremes of the term Intelligence. He discusses the ongoing debate on the Intelligence Theories based on G-Factor on one side and Multiple Intelligence Theories on other. So he wants to suggest a new theory of intelligence where both the points can be set at equal level. That new theory is ‘Trierarchic Theory of Intelligence’. He proposes that the successful intelligence is the ability to make balance between one’s needs & his socio-cultural contexts. In his theory he divides intelligence in three parts – first, Analytical (Analyzing, Evaluating, Comparing etc.); second, Creative (Creating, Exploring, Discovering, Inventing, Imagining etc.) and third, Practical (Applying, Using, Implementing, Putting in Practice etc.) abilities. He further says that human intelligence made up by these abilities.

n. Comparative Marketing & planning strategy in higher education (Darrel Norman Barrell & Brian C. Grizzell, 2008) - In this paper authors explain that institutions must be responsive to demographic shifts that have occurred in higher education by engaging in ongoing strategic planning similar to that which is done in
the business world. Smith and Tamer said the historically, colleges and universities have been extremely slow in adapting to social change.

o. An Empirical study on Expectations of Industries from Academia, (N Dubey & S Goyal): In this Research Paper authors focuses on the gaps between Expectations of the industries from the recent college graduates & Academic output & quality. It also presents the various factors creating impact over the quality of Graduates from the universities. The authors provide some recommendations for the above problem.

p. Multiple Intelligences, Educational Reforms & a Successful Career (Wu Tien Wu, 2003): In his research paper Wu discusses the applications of MI theory in the educational Reform in Taiwan. He focuses on the relationship between Successful Career & Successful Intelligence. Also throws light on the ten forms of talent, three functions of talent and career stages.
2.10. CHAPTER CONCLUSION-

In this chapter, researcher has described the theoretical background of the research which he studied through extensive literature survey, variety of booms on Multiple Intelligences and Career Planning, Articles in Magazines and other sources, Research Papers by experts in various journals, conferences etc., and website material used for citations. In this chapter, researcher has tried to explain the concept of Intelligence with its nature, definitions, affecting factors, its evolution in various time periods etc. Along with several theories of intelligences, he has explained the Multiple Intelligence Theory by H Gardner in details. In that, he has described evolution of Multiple Intelligence concept, its journey over time, extended value and scope in world of psychology and education, contribution of this concept in educational reforms occurred in foreign countries and its situation in Indian context etc. While explaining this, researcher has provided the information regarding such reforms in countries like US, China, Turkey and others. These countries use this Multiple Intelligence approach effectively but Indian researchers have done very little research work in this aspect.

Besides this, researcher has explained the concept of Career and Career Planning. Its process, factors affecting it are also described. The relation between Multiple Intelligences and Career Options has shown by researcher. Also, he has explained how one can build successful Career knowing his own intelligence level in various intelligence domains mentioned in MI Theory. The researcher has elaborated the concept of Managerial Competencies that MBA students should possess which are required in corporate. The general aspect of these competencies and it relation with basic intelligence domains in MI Theory is also described in the chapter. In this way,
researcher has tried to explain the concepts used in research and through this he tried to make this research work more understandable and more meaningful.

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