Chapter - 6

Summary, Findings & Conclusion
CHAPTER – 6
SUMMARY, FINDINGS AND CONCLUSION

The present chapter unveils a brief summary of all the chapters drafted in the thesis. It provides a concise summary of the Introduction: encompassing the background of the study, conceptual framework, objectives, hypothesis, etc. Review of Literature: comprising of the studies related to Multiple Intelligence, Creativity and Achievement Motivation, Research Methodology: describing the operational definitions, sample, research design, research tools used for the study and the statistical techniques used for analyzing the data. Analysis and Interpretation: which depicts the analysis of the data using various statistical techniques, the Results and Discussion that were obtained with reference to the hypothesis testing, the Educational Implications of the Study and Suggestions for further research are also mentioned.

6.1 BACKGROUND OF THE STUDY

In our day to day life, different people are likely to agree fairly well on who the bright people in their class or work group or social circle are. However, there are wide variations in layman’s definitions of the concept. We come across the concept of ‘intelligence’ very often in our lives.

Intelligence is very hard to define, Psychologists also differ from one another in their concept and definition. The concept of “intelligence is a highly argumentative topic for majority of the psychologists”. The description of intelligence is focused on the individual trait, which is the ability to understand, think, reason and other cognitive processes. The concept of intelligence seems to be a broad field which has occupied many researchers for years without they reaching a definite conclusion. We talk about an intelligent student, a prudent officer, a wise woman and a shrewd business man etc.

Psychologists and philosophers feel that they have not yet found a valid answer to the question of what intelligence is and how the mind is structured. Sternberg (1985) regards the concept of intelligence to be a most elusive one similar to Nickerson et al., (1993) who also regards intelligence to be a dynamic concept. This concept in his opinion though can be described using information processing theory of the nature of human intelligence has to be viewed in terms of mental processes which contribute to 'Cognitive task performance'.
Goertzel (1993), agrees with Sternberg and Nickerson et.al., He claims that the theories on intelligence are not the theories of the same thing but represent different aspects of it. Yet, it's the key to understanding the mind. So Goertzel says it cannot be found in contemporary psychology but in a new field called "complex system science" which is based on the idea that complex systems are systems, which - like immune systems, ecosystems, societies, bodies and minds have the capacity to organize themselves". Some theorists believe that intelligence is a basic ability that affects the performance on all cognitively oriented tasks. Consequently an "intelligent" person will do well in computing mathematical problems, in analyzing poetry, in taking history essay examination and in solving riddles.

Dissatisfaction with the traditional IQ tests have led to the development of a number of alternative theories, which suggests that intelligence is the result of a number of independent abilities, that uniquely contribute to human performance. Hitherto, many psychologists have proposed many theories which explain the different types of Intelligences and the expression of the functional relations. Of all these theories, the one which is most ravingly appreciated and well accepted by all is the Howard Gardners ‘Multiple Intelligences Theory’. In the next section, let us deal with the concept of Multiple Intelligences, Creativity and Achievement Motivation.

6.1.1 Introduction

Every individual is unique with their own individual differences. Our schools with the rigid curriculum and teaching methods, are strictly standardized. It doesn’t fit into the myriad intelligences of the students, instead the students have to struggle to fit into the burden of the curriculum that is heavily based on the verbal – linguistic and spatial intelligence.

Gardner’s gift to the classroom is in his conceptualization of intelligence as multifaceted and multidimensional (1983). He defines human potential in terms of the ability to solve problems in a culturally valued setting. In light of this broad perspective, Gardner identified eight realms of intelligence: verbal, logical, visual, musical, bodily, interpersonal, intrapersonal, and naturalistic. As seen in countless classrooms, these multiple intelligences work in various combinations as students interact and connect in the execution of complex tasks.
Multiple Intelligences Theory focuses human’s to real life circumstances, and emphasizes the training of students to solve problems. This connects to the real world, rather than abstract classroom learning, places it close to the true reason humans learn, for this reason, it has caught widespread attention from various international circles. When Gardner brought up the theory in America in 1983. Furthermore, the theory was extensively applied in the American education system, causing an educational reform (Sternberg, 1988). With multiple intelligences theory spreading across America and all over the world has brought profound changes in the school system.

Intelligence is a mixture of several abilities (Gardner Explains seven intelligences, and alludes of other) that are all of great value in life. but nobody’s good at them all. In life we need people who collectively are good at different things. A well-balanced world, and well-balanced organizations and teams, are necessarily comprised of people who possess different mixtures of intelligences. this gives the group a fuller collective capability than a group of identically able specialists.

The Multiple Intelligences theory is a Psychological and Educational theory which states that “An array of different kinds of intelligences, are present in Human beings”. He say’s that there are at least ‘7’ ways that people have of perceiving and understanding the world. Gardner labels each of these ways as distinct ‘intelligence’. He has identified 7 core intelligences in the book, “Frames of Mind”- The theory of Multiple Intelligences and two more later, in the book, “Intelligences Reframed” in 1999.


- Verbal – Linguistic: The ability to use words and languages.
- Logical – Mathematical – The capacity for inductive and deductive thinking and reasoning, as well as the use of numbers and the recognition of abstract patterns.
- Visual – Spatial – The ability to visualize objects and spatial dimensions, and create internal images and pictures.
Bodily – Kinesthetic – The wisdom of the body and the ability to control physical motion.

Musical – Rhythmic – The ability to recognize tonal patterns, and sounds as well as a sensitivity to rhythms and beats.

Interpersonal: The capacity for person to person communication and relationships.

Intrapersonal: The spiritual, inner states of being, self – reflection and awareness.

Naturalistic: The ability to understand nature, nurturing and classification.

In 1999, he added two more intelligences namely,

Existential: It is the capacity to raise and reflect on philosophical questions about life, death and the ultimate realities of the universe.

Moral Intelligences as this is still in study state it is not yet accepted as an intelligences.

6.1.2 Need and Scope of the Study

The basic need for this study emanates from the fact that it gives a correlational relationship between multiple intelligences. This study is focused largely on the Multiple Intelligences, as studies on the same are in the nascent stage and is evolving gradually. Therefore a research study on this topic is a worth while endeavor. The goal of the study is to find the operational nature to the existing knowledge.

Cognitive studies related to multiple intelligence is any day a welcome in the arena of school education as it help the students to develop better intellectual abilities, and skills to adjust finely to the school environment and eventually force well in order to mould themselves as better citizens of tomorrow.

Therefore there is an immense need to make a study in depth on Multiple Intelligences in order to find the kind of intelligence, an individual possess and there by shape and mould the individual accordingly in the best way.
The scope of the study lies in the fact that Multiple Intelligences approach is helpful in an educational system that evaluates on a ‘normal curve’ of only Verbal – Linguistic and Logical – Mathematical Intelligence is not the right way. Not all the students are successful here only half of its students can be above emerge whereas in a Multiple Intelligences school, that caters to all the intelligences and provides variety in student performance can strive towards success for all the students.

Further, unleashing the creativity potential of individuals leads to much productivity and better of the environment and finally the progress of the nation.

6.1.3 Objectives of the Study

The present study is an earnest attempt to investigate the influences of selected independent variables. On the dependent variables viz., Multiple Intelligences, Creativity and Achievement Motivation among the IX Standard students.

The investigation was conducted with an immense expectation of impressing the educators on the endorsement and of inclusion of Multiple Intelligences in the Educational System.

1. To study the level of Multiple Intelligences in total and type wise among the secondary school students of Mysore city.
2. To study the level of Creativity among the secondary school students of Mysore city.
3. To study the level of Achievement Motivation, among the secondary school students of Mysore city.
4. To study the difference in the level of Multiple Intelligences in total and type wise between the following categories of secondary school students of Mysore city:
   - Boys and Girls
   - Students of Government and Private School
   - Students of Urban and Rural Schools
   - Students of Kannada and English Medium
5. To study the difference in the level of Creativity between the following categories of secondary school students of Mysore city:
   - Boys and Girls
   - Students of Government and Private School
   - Students of Urban and Rural Schools
   - Students of Kannada and English Medium

6. To study the difference in the level of Achievement Motivation, between the following categories of secondary school students of Mysore city:
   - Boys and Girls
   - Students of Government and Private School
   - Students of Urban and Rural Schools
   - Students of Kannada and English Medium

7. To study the relationship between Multiple Intelligences and Creativity among the secondary school students of Mysore city.

8. To study the relationship between Multiple Intelligences and Achievement Motivation among the secondary school students of Mysore city.

6.1.4 Statement of the Problem

The problem selected for the present investigation was “A study of Multiple Intelligences, Creativity and Achievement Motivation among the secondary school students of Mysore City”.

6.1.5 Hypotheses

- **Hypothesis – 1**: There is no significant difference in the level of Multiple Intelligences in total and type wise between the Boys and Girls studying in the secondary schools of Mysore city.

- **Hypothesis – 2**: There is no significant difference in the level of Multiple Intelligences in total and type wise between the students of Government and Private schools studying in the secondary schools of Mysore city.
• **Hypothesis – 3**: There is no significant difference in the level of Multiple Intelligences in total and type wise between the students of Urban and Rural schools studying in the secondary schools of Mysore city.

• **Hypothesis – 4**: There is no significant difference in the level of Multiple Intelligences in total and type wise between the students of Kannada and English Medium studying in the secondary schools of Mysore city.

• **Hypothesis – 5**: There is no significant difference in the level of Creativity between the Boys and Girls studying in the secondary schools of Mysore city.

• **Hypothesis – 6**: There is no significant difference in the level of Creativity between the students of Government and Private Schools studying in the secondary schools of Mysore city.

• **Hypothesis – 7**: There is no significant difference in the level of Creativity between the students of Rural and Urban Schools studying in the secondary schools of Mysore city.

• **Hypothesis – 8**: There is no significant difference in the level of Creativity between the students of Kannada and English Medium studying in the secondary schools of Mysore city.

• **Hypothesis – 9**: There is no significant difference in the level of Achievement Motivation between the Boys and Girls studying in the secondary schools of Mysore city.

• **Hypothesis – 10**: There is no significant difference in the level of Achievement Motivation between the students of Government and Private Schools studying in the secondary schools of Mysore city.
• **Hypothesis – 11**: There is no significant difference in the level of Achievement Motivation between the students of Urban and Rural Schools studying in the secondary schools of Mysore city.

• **Hypothesis – 12**: There is no significant difference in the level of Achievement Motivation between the students of Kannada and English Medium studying in the secondary schools of Mysore city.

• **Hypothesis – 13**: There is no significant relationship between Multiple Intelligences and Creativity among the students studying in the secondary schools of Mysore city.

• **Hypothesis – 14**: There is no significant relationship between Multiple Intelligences and Achievement Motivation among the students studying in the secondary schools of Mysore city.

6.1.6 Variables

The variables selected for the study are as follows and they are explained in detail in vide 3.3.

**Main Variable**
1. Multiple Intelligences
2. Creativity
3. Achievement Motivation

**Background Variable**
1. Gender
2. Type of School
3. Locale of the School
4. Medium of Instruction

6.2 Review of Related Literature

A brief review of related literature on Multiple Intelligences, Creativity and Achievement Motivation is listed to identify the priorities and lacunae of research studies in the respective areas.
The insights from the review of related literature pertaining to Multiple Intelligences reveal that the studies are still in the nascent stage. The research findings show a positive improvement in the children’s performance by the implementation of Multiple Intelligences theory.

Various studies with respect to locale of the school have shown significant difference with regard to creative thinking. In some studies the urban students have scored over the rural students, rarely the rural students have scored over the urban. Studies on Creativity with respect to background variables like ses, caste, tribe, locale of the school and types of schools have been conducted in India are evident.

Insights from the review of literature related to Achievement Motivation shows there are numerous studies on Achievement Motivation with respect to background variables like ses, gender, type of school, locale of the school etc.,

6.3 Methodology

The present study is a descriptive cum correlational study. A brief summary of the path tread for the collection of data has been recorded here. It is been carried out in the following stages.
1. A thorough study on Multiple Intelligences and identification of various skills, abilities activities and understandings related to each intelligence were done.
2. Based on the above findings the Multiple Intelligences scale was constructed by the researcher followed by a pilot study to determine the reliability and validity of the tool constructed
3. Two standardized tests were selected for the measurement of Creativity and Achievement Motivation. All the three tests were administered to the students in different sessions one at a time.
4. The data collected was scored and treated with appropriate statistical techniques.

A normative survey was employed and the data have been collected from a sample of 1005 secondary school Boys and Girls of IX std, Mysore, using random sampling technique for conducting the study.
A. Purpose of the Scale

As children do not learn in the same way, they cannot be assessed in a uniform fashion. Therefore, it is important that a teacher should develop “intelligence profiles” for each student. Knowing how each student learns will allow a teacher to make more informed decisions on what to teach and how to dissipate information (David, L. 1992).

The purpose of the scale was to find out the level of Multiple Intelligences of the secondary school students of Mysore city.

B. Type of test items

The Questionnaire consists of eight sections. It was divided into two parts for easy administration as Part I and Part II. Totally there are 80 items. The items were based on the eight intelligences. **Part I** – consists of Verbal-Linguistic, Logical-Mathematical, Visual-Spatial, and Bodily-Kinesthetic. **Part II** consists of Musical-Rhythmic, Interpersonal, Intrapersonal and Naturalistic Intelligences. The questions were pivoted on the above mentioned aspects are Multiple choice questions:

The questionnaires were distributed to the students of IX std and necessary instructions were given. The students filled in the personal data sheet first and then the Multiple Intelligences scale. The students took, 30 – 40 mins to fill in the questionnaire.

The researcher attempted to construct a Multiple Intelligence scale, as the Multiple Intelligences tests present were affiliated to foreign culture. The present multiple intelligence scale is a five point scale. The items are in the question form. The questions are varied and five response categories are provided for responding to every item.

C. Rationale for selecting responses

Commonality of responses is not possible as similar responses are not obtained to all the questions, as the researcher is trying to assess the level of multiple intelligences in total and type wise order to obtain a cognitive profile.
Each question was set against a five point scale. Weight-age was given to the position of the answer, i.e., A - 4, B – 3, C – 2, D – 1 and E – 0. The scores in this scale ranged from 40 to 240.

D. Reliability and Validity

Once the tools are constructed, the researcher must demonstrate the instruments constructed are reliable, because without reliability, research results using the instrument are not replicable, and replicability is fundamental to the scientific method.

Internal consistency is the extent to which tests or procedures assess the same characteristic, skill or quality. It is a measure of the precision between the observers or of the measuring instruments used in a study. This type of reliability often helps researchers interpret data and predict the value of scores and the limits of the relationship among variables. It measures whether several items that propose to measure the same general construct produce similar scores. In the present research endeavor, the multiple intelligences test is divided into, 8 categories, as mentioned earlier. The internal consistency reliability test provides a measure that each of these particular intelligences is measured correctly and reliably.

6.3.1 Construction of Research Tools

This study has been tailored on the pivotal importance that tapping the different kinds of intelligences hidden in the child as a motto, rather than cling on to the age old concepts which emphasize only on few factors. In the earlier version of intelligences theories, the actual intelligence of the child (as they do not measure) does not come to the light of the day and the child is forced to take up the disciplines, routes and ways in which he / she may not be possessing any intelligence and ruin their career’s and further their lives.

The questions were based on the “Intelligence-specific understandings, skills, activities or tasks, capacities and knowledge”. Due weightage was given to all the dimensions while selecting items. The scale contains ‘80’ statements which represent the ‘universe of content’.
The questionnaire was constructed by the researcher on all the eight multiple intelligences, Viz., …. Verbal – Linguistic, Logical – Mathematical, Visual – Spatial, Bodily Kinesthetic, Musical – Rhythmic, Interpersonal, Intra – personal and Naturalistic Intelligences.

Reliability and Validity
The reliability Co-efficient of the tool for the present study were as follows.
I. The internal consistency of reliability of this tool was established using Co-efficient of consistency cronbachs alpha the and was found to be .8786.
   • The co – efficient of Guttman – split half reliability was found to be .8763.
II. The test and retest was also found to be highly reliable at .7832
III. The correlation between forms was found to he .7865. This indicates that the tool is highly reliable.

6.3.2 Collection of Data
On Multiple Intelligences, Creativity and Achievement Motivation among the secondary schools students. After the tools were constructed and tested for reliability and validity they were administered to the IX Std. Students.
I Phase :  In the first phase the personal data sheet and and the Multiple Intelligences scale was administered in one period.
II Phase :  In the second phase the standardized “A verbal test of Creative thinking by Baqer Mehdi”, was administered to find the creativity of the secondary school students.
III Phase :  In the third phase the standardized test of “Deo Mohan Achievement Motivation Scale (DMAMS) by Prathiba Deo and Asha Mohan” (DMAMS), to find the Achievement Motivation of the secondary school students.

After the data was collected, it was scored according to the scoring criterion mentioned in the vide 3.8 and the following the aspects were observed.
6.3.3 Sampling Design

Sample 1005

Boys - 525

Rural - 286

Urban - 239

Govt. - 110

Pvt. - 129

Govt. - 110

Pvt. - 176

Girls - 480

Rural - 189

Urban - 291

Govt. - 52

Pvt. - 239

Govt. - 104

Pvt. - 85

Kannada - 294

English - 231

Kannada - 289

English - 191

6.3.4 Research Tools

Tools used for the research study

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Objective of the Study</th>
<th>Name of the Scale</th>
<th>Constructed By</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To find the Multiple Intelligences of the Students</td>
<td>Multiple Intelligences Scale</td>
<td>Researcher</td>
</tr>
<tr>
<td>2.</td>
<td>To find the Creativity of the Student</td>
<td>A verbal test of Creative thinking</td>
<td>Baqer Mehdi</td>
</tr>
<tr>
<td>3.</td>
<td>To find the Achievement Motivation</td>
<td>Deo Mohan Achievement Motivation Scale (DMAMS)</td>
<td>Prathiba Deo and Asha Mohan</td>
</tr>
<tr>
<td>4.</td>
<td>To find the Gender, Type of School, Locale of the School</td>
<td>Personal Data Sheet</td>
<td>Researcher</td>
</tr>
</tbody>
</table>
### 6.3.5 Statistical Technique’s

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Statistical Technique’s used in the study</th>
<th>Description of the Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>T – Test</td>
<td>To find out the significant difference of Means pertaining to the different levels of Multiple Intelligences</td>
</tr>
<tr>
<td>2.</td>
<td>Chi Square Test</td>
<td>A chi-square test is a statistical test commonly used for testing independence and goodness of fit.</td>
</tr>
<tr>
<td>3.</td>
<td>Co-efficient of co-relation</td>
<td>To find out the relationship between 2 dependent variables viz., Multiple Intelligences and Creativity, Multiple Intelligences and Achievement Motivation</td>
</tr>
</tbody>
</table>

**Limitation**: 1. The present study is confined to IX Std. Students of the Mysore City Only.

### 6.4 ANALYSIS AND INTERPRETATION

Is Conducted With The Following Perspectives

1. The level of Multiple Intelligences in total and type wise with reference to Gender, Type of School, Locale of the School and Medium of Instruction were determined.
2. The level of Creativity with reference to Gender, Type of School, Locale of the School and Medium of Instruction were determined.
3. The level of Achievement Motivation with reference to Gender, Type of School, Locale of the School and Medium of Instruction were determined.
4. Relationship between Multiple Intelligences and Creativity,
5. Relationship between Multiple Intelligences and Achievement Motivation.
6. Testing of hypothesis.

### 6.5 MAJOR FINDINGS OF THE STUDY

The ultimate purpose of research is to determine the general principles based on the observed and quantified relationship between the Main Variable and the Background Variables.

#### A. Multiple Intelligences

In view of the findings obtained it was found that the majority of the students have obtained average level of scores for all the Multiple Intelligences type wise viz., Verbal-Linguistic, Logical-Mathematical, Visual-Spatial, Bodily-Kinesthetic, Musical-
Rhythmic, Inter-Personal, Intra-Personal, Naturalistic and also Multiple Intelligences Total. Secondly more number of students in comparison to below average level of scores have obtained above average level of scores. Lastly less number of students compared to high and average level of scores have obtained below average level of scores.

Details of the students who have obtained average level of scores in Multiple Intelligences

Among the average level of scores, it is evident that the highest percentage i.e. 72.71% of the students have obtained average level of scores in Intra – Personal Intelligence.

Followed by

- Bodily – Kinesthetic Intelligence with 70.7%.
- Verbal – Linguistic Intelligence with 69%.
- Logical – Mathematical Intelligence with 67%.
- Naturalistic Intelligence with 67%.
- Visual – Spatial Intelligence with 66.1%.
- Interpersonal Intelligence with 64.6%.

And lastly 62.3% of the students have obtained average level of scores in Musical – Rhythmic Intelligence.

In Multiple Intelligences total 69% of the students have obtained average level of scores.

Details of the students who have obtained above average level of scores in Multiple Intelligences:

Among the above average level of scores, the highest percentage i.e. 22.5% of the students have obtained above average level of scores in Interpersonal Intelligence, followed by Visual – Spatial Intelligences with 20.2%, Logical – Mathematical Intelligence with 19%, Musical – Rhythmic Intelligence with 18.5%, Verbal – Linguistic Intelligence with 18.1%, Naturalistic Intelligences with 17.5%, Bodily Kinesthetic Intelligence with 16.8% and lastly Intra – Personal Intelligence with 16%.

In Multiple Intelligences total 16.4% of the students have obtained above average level of scores.
Details of the students who have obtained below average level of scores in Multiple Intelligences:

Among the below average level of scores, the highest percentage i.e. 19.2% of the students have obtained below average level of scores in Musical – Rhythmic Intelligence, followed by Naturalistic Intelligence with 15.5%, Logical – Mathematical Intelligence with 14%, Visual – Spatial Intelligence with 13.7%, Verbal – Linguistic Intelligence with 12.9%, Inter – Personal Intelligence with 12.9%, Bodily – Kinesthetic Intelligence with 12.4% and lastly Intra – Personal Intelligence with 11.2%.

In Multiple Intelligences total 14.6% of the students have obtained below average level of scores.

B. Creativity

From the result obtained it was found that the majority of the students have obtained average level of scores in all the components of Creativity and Creativity Total. Secondly more number of students in comparison to below average level of scores have obtained above average level of scores in Creativity and Creativity Total. Lastly less number of students compared to high and average level of scores have obtained below average level of scores in Creativity and Creativity Total.

Details of the students who have obtained above average level of scores in Creativity

Among the average level of scores, the highest percentage i.e. 70.5% of the students have obtained average level of scores in Originality.

The second highest percentage i.e. 70.1% of the students have obtained average level of scores in Flexibility.

And lastly 66.3% of the students have obtained average level of scores in Fluency.

In Creativity total 64.2% of the students have obtained average level of scores.

Details of the students who have obtained above average level of scores in Creativity

Among the above average level of scores, the highest percentage i.e. 18% of the students have obtained above average level of scores in Fluency followed by Flexibility with 17.4% and lastly Originality 17%.

In Creativity total 19% of the students have obtained above average level of scores.
Details of the students who have obtained below average level of scores in Creativity

Among the below average level of scores, highest percentage i.e., 16.8% of the students have obtained below average level of scores in Creativity Total followed by Fluency with 15.7% and lastly both the components of Creativity viz., Flexibility and Originality have obtained below average level of scores.

C. Achievement Motivation

The outcomes of the study shows that the majority of the students have obtained average level of scores in Achievement Motivation. Secondly more number of students in comparison to below average level of scores have obtained above average level of scores in Achievement Motivation. Lastly less number of students compared to high and average level of scores have obtained below average level of scores in Achievement Motivation.

Details of the students who have obtained average, above average and below average level of scores in Achievement Motivation

The highest percentage i.e. 70% of the students have obtained average level of scores in Achievement Motivation. The Second highest percentage i.e., 16.3% of the students have obtained above average level of scores in Achievement Motivation. And lastly 13.7% of the students have obtained below average level of scores in Achievement Motivation.

The findings of the Hypothesis testing in the present study were as follows

1. There is a significant difference in the level of Multiple Intelligences in total and type wise between the Boys and Girls studying in the secondary schools of Mysore city.
2. There is no significant difference in the level of Multiple Intelligences in total and type wise between the students of Government and Private schools studying in the secondary schools of Mysore city.
3. There is no significant difference in the level of Multiple Intelligences in total and type wise between the students of Rural and Urban schools studying in the secondary schools of Mysore city.
4. There is no significant difference in the level of Multiple Intelligences in total and type wise between the students of Kannada and English Medium studying in the secondary schools of Mysore city.
5. There is no significant difference in the level of Creativity between the Boys and Girls studying in the secondary schools of Mysore city.
6. There is a significant difference in the level of Creativity between the students of Government and Private Schools studying in the secondary schools of Mysore city.

7. There is a significant difference in the level of Creativity between the students of Rural and Urban Schools studying in the secondary schools of Mysore city.

8. There is a significant difference in the level of Creativity between the students of Kannada and English Medium studying in the secondary schools of Mysore city.

9. There is a significant difference in the level of Achievement Motivation between the Boys and Girls studying in the secondary schools of Mysore city.

10. There is a significant difference in the level of Achievement Motivation between the students of Government and Private Schools studying in the secondary schools of Mysore city.

11. There is a significant difference in the level of Achievement Motivation between the students of Urban and Rural Schools studying in the secondary schools of Mysore city.

12. There is a significant difference in the level of Achievement Motivation between the students of Kannada and English Medium studying in the secondary schools of Mysore city.

13. There is a significant relationship between Multiple Intelligences and Creativity among the students studying in the secondary schools of Mysore city.

14. There is a significant relationship between Multiple Intelligences and Achievement Motivation studying in the secondary schools of Mysore city.

6.6 EDUCATIONAL IMPLICATIONS

The cynashore of Educational Implications of our study is the fact that, any research study on Multiple Intelligences has a grand welcome in the field of Education Multiple Intelligences has sort of brought about a “renaissance”, in the field of education which has burdened the students in a ‘suffocating’ curriculum heavily based on Verbal – Linguistic and Logical – Mathematical Intelligence only.

1. The major implication of the study is in favour of the student community it helps the students to discover their own strengths. They will realize that all of them possess eight different kinds of strengths and their self-esteem is enhanced. All the strengths may not be uniformly developed some strengths may be strong and well developed others may be in a latent state but the fact that their intelligence other than Verbal – Linguistic and Logical – Mathematical Intelligence have been recognised itself brings joy and provides them with immense self – confidence and boosts their morale and gets gratification about their “Self – Worth”
2. The study reveals that all the secondary school students possess the eight multiple intelligences in varying levels. Every child possesses the eight multiple intelligences in varying levels. These intelligences can be enhanced through creative strategies, appropriate instructional material and a stimulating nurturing environment.

3. The guidance and counselor should administer the Multiple Intelligences tests at the end of the secondary school in order to find out the kind of Multiple Intelligences possessed by the students and thereby guiding them towards the respective disciplines of studies to be taken up in colleges.

4. Even though the majority of the students have obtained average level of scores it is imperative that educational support should be given in the respective types of Multiple Intelligences and facilitate in maximizing their potential to the fullest. As Gardner considers intelligence as a trainable faculty appropriate exposure, opportunities for learning and necessary guidance will help in enhancing the development of the intelligence.

5. The researcher was inspired to use Gardener’s Multiple Intelligences theory in this study because, if this theory is incorporated in the present education system, each child can succeed in their educational pursuits as there are many possible pathways to learning.

6. The outcome of the study indicates that the Intrapersonal intelligence is the highest and the most common intelligence among the sample selected. This reveals that the students possess self-awareness and are capable of understanding their own emotions, goals and motivations. These capacities are extremely useful in improving their thinking and taking charge of their life in the right way in future.

7. The next kind of Intelligence prevalent among the students was the Bodily-Kinesthetic Intelligence this reveals that they like to learn through touch and playful physical activities. This finding indicates that the school curriculum should include more of practical, hands-on activities, concepts should be taught through learning by doing methods.

8. The prevalence of Verbal-Linguistic and Logical-Mathematical Intelligences shows that the students are conditioned to the present curriculum.

9. This study strives towards the introduction and directing towards the implementation of new educational practices into our education system. Teachers become aware of Multiple Intelligences. They should be aware of their students Multiple Intelligences. They should examine at which activities their students are best and guide them towards improvement.
10. The theory is an ‘eye opener’ for many teachers, parents and administrators who brand the students as a “failure” in the educational system heavily burdened on only 1 or 2 intelligences. They should appreciate the other intelligences.

11. The teachers, should include Multiple Intelligences activities in the context of teaching in order to tap the latent talent of the children. Lessons and activities based on Multiple Intelligences should be framed.

12. For a meaningful learning, teachers should be able to implement some innovative ideas, new techniques and methods of teaching in their class rooms in accordance to the various types of intelligences. Not only that the success of any programme depends upon the teachers, they should have good knowledge on the new vista’s of teaching and the psychology of students.

13. An earnest effort should be made by the practioners to change the curriculum to a certain extent atleast and be redesigned according to the Multiple Intelligence theory.

14. The present study provides new avenues for exploring the role of Multiple Intelligence.

15. Our schools have exclusively emphasized on the development of only the 3r’s. Although many students function well in this curricula, some are unable to. So this theory argues that students will be more successful by a broader vision of education. Where in teachers use different methodologies exercises and activities to reach all students.

16. Parents also should be aware of their children’s tendency and dominant character of their intelligences.

**Educational Implications of Creativity**

1. Encouraging Creativity across all the eight domains of Multiple Intelligences will help the children become more confident. For formulating various curricular activities, combining elements of several domains will be more beneficial for children. The traditional views of intelligence are only based on two of Gardner’s identified domains (Linguistic and Logical – Mathematical), whereas the creative arts typically refer to only Musical or Visual – Spatial Intelligences.

2. In Creativity majority of the students have obtained average level of scores in originality which shows that we should encourage the children to come out with their own original ideas without fear. Schools should provide opportunities to showcase divergent thinking and originality instead of sticking on to the age old facts.
3. One of the most important implications of this study is that children learn best when they are actively involved in activities that use all the different sense using Gardeners Multiple Intelligences, the educators and parents can design activities that enhance all domains and develop their cognitive faculties and natural Creativity.

4. The teachers and social workers along with the other team members should develop appropriate measures to give opportunities to the Creative potentials. The creative adolescents should be specially treated and provided with appropriate responsibilities so that they instead of being problematic will then be productive members in the society.

5. The study shows that Achievement Motivation facilitates Creativity. The major argument is that Creativity is a cognitive faculty like intelligence and does not have a significant relationship with Achievement Motivation.

**Educational Implications for Achievement Motivation**

The results of the study will be of great help to educators and especially to secondary school students most of the students who achieve low tend to question the evaluation system. They do not realize that they are securing marks for whatever, they have written in their exams it is actually a reflection of their efforts, their achievement motivation to secure higher grades. The net result of measuring achievement motivation lies in the fact that it takes a pivotal role in helping the individuals to express their Creativity, intelligences etc. individuals with significant Achievement Motivation levels behave in very different ways, when they face a unusual or special type of situation.

It is important for both parents, and educators, to understand why promoting and encouraging academic motivation from an early age is imperative. Achievement Motivation is crucial to a student’s academic success at any age, because students form self-concepts, values, and beliefs about their abilities at a young age. The development of early academic motivation has significant implications for later academic careers. A great deal of research has found that students high in academic motivation are more likely to have increased levels of academic achievement and have lower dropout rates.

1. Implications of finding Achievement Motivation can be used for co-operative learning students with positive Achievement Motivation also influence the peer in their class-room.
2. Achievement Motivation usually results in higher overall performance of an individual. If the students are motivated to achieve and also are equally interested in acquiring knowledge the world would surely be a better place.

3. The findings reveal that Achievement Motivation should be enhanced in the students by the teachers in giving much interest in guidance and counseling.

4. Achievement Motivation and hard work will lead to greater heights of achievement. Many times more than the Multiple Intelligences present, a sense of Achievement Motivation, hard work, helps in academic and social achievements.

5. Educational implication of finding the Achievement Motivation of students is that if individuals with Achievement Motivation are given with an assignment or project with any reward or punishment for completing it also, continues to work, where as people with no Achievement Motivation stop the work.

6. Achievement Motivation is very essential for achieving academic goals. A child who really wants to learn will learn irrespective of the odds and difficulties that come in their way.

7. The implication of result of the Achievement Motivation of the students is that we can use the results for social learning. Teachers can group students with highly motivated students. Pairing students like this leads to productivity. The highly motivated classmates influence the students in a positive way.

6.7 SUGGESTIONS FOR FURTHER STUDY

The present study is an initiative, a pioneering study to bring about the basic awareness amongst the educational community about the changing perspective on intelligence it should pave way for much more in-depth studies in various dimensions with respect to Multiple Intelligences, Creativity and Achievement Motivation. Based on the results of the study, following recommendations are made;

1. Similar researches on Multiple Intelligences, Creativity and Achievement Motivation may be conducted using different grade levels/classes, different courses

2. As the Multiple Intelligences test is not an air-tight measurement of the intelligences, the present and future researchers of inter-disciplinary areas like psychology, cognitive studies neurological studies and educationists can strive together towards the development of a measurement scale to get a positive picture of the radiant cognitive profile and not to label the individuals derogatively.
3. Research studies on instruction using with Multiple Intelligences curriculum can be pursued by the young and enthusiastic researchers.

4. Experimental studies can be conducted on various classes using Multiple Intelligences instruction and control groups.

5. Studies on the use of cooperative learning in the teaching – learning should be encouraged.

6. Workshops should be conducted for administrators, teachers and parents to realize the effect of Multiple Intelligences towards achievement.

7. Research studies to incorporate Multiple Intelligences based instruction at the teacher training level is the need of the hour.

8. Multiple Intelligences instruction should be extended to in-service teachers through professional development courses.

9. The curriculum framers, Government authorities related to school instruction should be enlightened with research studies giving positive results using the incorporation of Multiple Intelligences instruction and learning in school and thereby facilitate for the incorporation of Multiple Intelligences curricula.

10. Research workshops should be conducted to enhance student’s personalities by tapping latent Intelligences.

11. Studies about Multiple Intelligences along with various other variables can be conducted.

12. Attitude study of students, teachers, parents, practitioners and administrates towards incorporation of Multiple Intelligences instruction should be conducted.

13. Qualitative research on Multiple Intelligences would be an interesting arena.

14. Bright young researchers may try out novel interdisciplinary topics, with reference to Multiple Intelligences viz., cognitive studies, neurological studies, physiological and psychological studies.

15. Curriculum changes may be made to teach using Multiple Intelligences techniques.

16. Studies on Creativity and Achievement Motivation of secondary school students can be conducted.

17. Studies on Achievement Motivation and Academic achievement of studies can be conducted at various levels of secondary and higher secondary students.
18. Experimental studies on co-operative learning can be conducted and the influence of highly Achievement Motivation of students on the peer can be studied.

19. Studies on Achievement Motivation at lower classes can be conducted.

**Limitations of the Study**

1) The study would be limited to secondary school students only

2) The study is limited to the urban and rural schools of Mysore city, along with rural areas of 3 taluks viz., Nanjangud, T. Narasipura and K. R. Nagar.