5:01 INTRODUCTION

Gifted students typically find their regular classroom experiences dull and less than challenging. Although some rare teachers detect the gifted child's spark and do everything they can to fan it to flame, the majority of gifted students sit in schools for twelve years experiencing precious little challenge and motivation. This therefore, implies that the typical classroom diet is inadequate for the academically talented child. Gifted children should, therefore, be provided with learning activities that challenge them and expand and deepen their understanding (Greenlaw and McIntosh, 1988).

5:02 MEANING

The specific defining attributes of the concept of enrichment in planning educational programmes have varied across the years and across the programmes which have been labelled 'enrichment'. Generally, however, the term has been used to designate the process of providing activities and/or content areas which are outside the range of the regular curriculum offered in the school. Enrichment denotes those programmes in which the student remains at grade level but spends part of the day or week engaged in activities which are supplemental to those offered in his or her classroom. The assumption is made that these activities have been especially structured to meet the particular needs of gifted children (Kauffman and Hallahan, 1981).

5:03 HORIZONTAL AND VERTICAL ENRICHMENT

Newland (1976) further divided the concept of enrichment into the categories of horizontal and vertical enrichment. Horizontal enrichment is used to designate those activities which involve content areas
which may not be part of the regular curriculum (or exploration of those areas in more depth) but in which the level of sophistication used in the study and discussion of those topics remains at about the same grade level. The assumption underlying horizontal enrichment is the need for gifted children to become acquainted with a broad spectrum of content areas.

If however, the level of thinking skills required in carrying out the enrichment activities is more sophisticated, then the enrichment activity is considered vertical enrichment. It is based on the need for gifted children to develop more complex cognitive processing skills such as analysis, evaluation, discrimination and creativity.

Although the horizontal - vertical distinction is theoretically possible and is sometimes incorporated into models for enrichment, it has not served a useful purpose in the study of enrichment programmes. Programmes and models which have been labelled enrichment have generally been based on a combination of both vertical and horizontal enrichment with their components and their effects being indistinguishable. Even a programme which has stated explicitly that its objective is to develop higher level thinking skills will usually rely on content materials outside the regular curriculum in order to achieve these goals.

5:04 ACADEMIC CURRICULUM FOR THE GIFTED

While it is true that gifted students do need to know the same content as other children and youth and that most will be able to
master the skills and content easily and well, it is not true that these skills and this content should be covered in the same way for the gifted as for other learners. By definition gifted youths require a differentiated curriculum to adequately meet their learning needs. According to Greenlaw and McIntosh (1988) curriculum differentiated for the gifted is purposely made, unlike or different from the regular curriculum, observers can perceive and implementers can express differences between it and the regular curriculum. In other words differentiated curriculum for the gifted has characteristics that distinguish it from regular curriculum for non-gifted students.

Curriculum for the gifted cannot just be differentiated, it must be qualitatively differentiated (Maker, 1982). Based on her own work and that of other experts in the field of gifted education, Maker (1982) makes several recommendations concerning how basic curriculum can be made more appropriate for gifted children and youth. She says modifications should be made in the areas of content, process, product and learning environment.

At least sixty curriculum models exist for the gifted. However, only three models will be mentioned for the purpose of this study. These models emphasize three components that are vital in planning and developing curriculum for gifted students. These are:

1. Bloom's Cognitive Taxonomy, which emphasizes higher level thinking.
2. William's Teaching Strategies for Thinking and Feeling which emphasize creativity.
3. Renzulli's Enrichment Triad, which emphasizes product. (Greenlaw and McIntosh, 1988).

BLOOM'S COGNITIVE TAXONOMY

Bloom's Cognitive Taxonomy is one of the better known and more widely used models for creating curriculum for the gifted because of its emphasis on developing higher level thinking. It is also relatively simple in design and is easily applicable by teachers with a minimum of training in its use (Greenlaw and McIntosh, 1988).

As a taxonomy, Bloom's is hierarchical in nature, i.e. achievement at higher levels is dependent on success at lower levels. The following six levels comprise Bloom's Cognitive Taxonomy.

1. Knowledge: which is the lowest level, consists of remembering what has been read, seen or heard, with no transformation of the information received.

2. Comprehension: involves the lowest level of understanding and requires that a student be able to restate what has been read, seen, or heard in his or her own words and make use of the information, although not relating the information to any other ideas already possessed or presented.

3. Application: involves putting the new information to use in a different situation, without being told how to do so.
4. **Analysis:** entails deconstructing the whole into its component parts so that the relationship between the parts can be seen.

5. **Synthesis:** entails constructing a whole from constituent parts - although the new whole or pattern or structure is not the one from which the parts were taken.

6. **Evaluation:** is the highest level in the taxonomy, and it involves making judgements about the value of something, for a particular purpose. Students must either develop their own criteria or be able to apply the criteria of others and use various types of evidence in order to make these critical, evaluative judgement.

**WILLIAM'S TEACHING STRATEGIES FOR THINKING AND FEELING**

William outlines eighteen teaching strategies that lead to creative thinking.

1. **Paradox:** A seemingly contradictory statement that may nonetheless be true.

2. **Attribute:** A quality or characteristic belonging to a person or thing, a distinctive feature.

3. **Analogy:** A form of logical inference, based on a correspondence in some respect between people or things otherwise dissimilar.
4. **Discrepancy:** A divergence or disagreement, as between facts or claims; inconsistency.

5. **Provocative Question:** Questions intended to excite and stimulate students' thinking and exploration of new ideas.

6. **Example of change:** A demonstration of how dynamic the world is or can be. Making provision for activities that employ modifications or substitutions.

7. **Example of habit:** Habits are a constant, often unconscious inclination to perform some act, acquired through frequent repetition. Activities for this strategy seek to provide examples that encourage students to avoid habit-bound thinking.

8. **Organised Random Search:** Developing a structure to lead randomly to another structure.

9. **Skills of Search:** The development of methods to search for information. This might include trial and error, historical skills or experimental skills.

10. **Tolerance for ambiguity:**

    Ambiguous situations are open to multiple interpretation. Activities for this strategy seek to present open-ended situations for discussion.
11. **Intuitive Expression:** Intuition is the act of knowing without the use of rational process. Activities for this strategy seek to present open-ended situations for discussion.

12. **Adjustment to Development:** This strategy seeks to enable students to develop or change rather than merely adjust to situations.

13. **Study of Creative people and Processes:** Activities for this strategy encourage students to look at people who are creative and explore the processes they utilise.

14. **Evaluation of Situations:** Activities for this strategy encourage students to engage in prediction from the delineation of actions and ideas and to form conclusions based on careful consideration of consequences and inferences.

15. **Creative Reading Skill:** Using text as a stimulus for the creation of an idea or a product.

16. **Creative Listening Skill:** Encouraging students to respond to oral text in various ways that will allow them to develop ideas and respond to questions.

17. **Creative Writing Skill:** Encouraging students to express their feelings and emotions in clearly written passages.
18. **Visualization Skill**: Activities for this strategy encourage students to form a mental image that includes an unusual or unique perspective (Greenlaw and McIntosh, 1988).

**RENZULLI'S ENRICHMENT TRIAD MODEL**

The Enrichment Triad Model is one of the very few teaching-learning models developed specifically for use with gifted children. He developed the model after extensive experience working with, and evaluating programmes for gifted children and youth. According to Greenlaw and McIntosh (1988, p. 227), Renzulli "sought to design a model that could be used as a guide in developing defensible programmes for the gifted - programmes that are qualitatively different". His model ties in closely with his conclusion about what constitutes giftedness. In his three ring conception, giftedness resides at the intersection of three clusters of traits (1) Above-Average General Ability, (2) Task Commitment, and (3) Creativity. Renzulli believes that the interaction of these three clusters is necessary for creative productive accomplishment.

Accordingly, Renzulli's triad model includes three types of enrichment:

1. **Type I - General Exploratory Activities**:

   The three main purposes of Type I enrichment, general exploratory activities are (1) exposing students to topics that are not a normal part of the school's curriculum, (2) making general enrichment activities available to all interested students, and (3) inviting highly motivated students to find and pursue a later Type III, Independent
Project. Gifted students should understand that they are to explore these interest areas purposefully, with a view toward identifying ideas for further study. Some students already will have long standing interests or hobbies which are well suited for type III projects (photography, drama, calligraphy and so on). In these cases, Type I activities serve mainly to expose students to new topic areas.

Resource centres should be well stocked with books, magazines, and other media dealing with a large number of topics.

Another good exploratory activity is field experiences in which gifted and talented students meet dynamic people involved in creative and problem-solving endeavour - artists, actors, engineers, museum and art gallery curators, T.V show directors, business leaders and so on. This type of field trip goes beyond just visiting an art gallery or planetarium. The purpose is not to "look at" but to become involved with professionals and their activities.

The design of Type I exploratory activities will require effort and ingenuity by participating teachers. (Davis and Rimm, 1989).

Type II Enrichment-Group Training Activities:

The purpose of Type II Enrichment-Group Training Activities is to promote the development of a broad range of thinking and feeling processes (Renzulli and Reis, 1985).

The following are the general and specific skills especially recommended by Renzulli and Reis.
1. Creative thinking, problem solving, critical thinking, decision making and affective processes such as appreciating and valuing.

2. Learning how to learn skills, such as listening, observing, perceiving, note taking, outlining, interviewing, surveying, analysing and organising data and other research skills.

3. Using advanced level reference materials including a variety of print and non-print references, information retrieval systems and other procedures for gaining access to advanced resources.

4. Writing, oral and visual communication skills that will be directed toward maximising the impact of student products upon appropriate audiences. (Davis and Rimm, 1989).

The objective of type II Enrichment is "to develop in the learner the processes or operations (the powers of the mind) that enable him/her to deal more effectively with content". Renzulli (1977, pp.24-25).

**TYPE III ENRICHMENT - INDIVIDUAL AND SMALL GROUP INVESTIGATION OF REAL PROBLEMS:**

With Type III enrichment activities, the gifted young person becomes an actual researcher investigating a real problem. Renzulli emphasises that students should act as producers of knowledge, not merely consumers of information. They should not simply be asked to consult more encyclopedias, text books or other already summarized sources and then
write a report. They should use raw data as their main information source, from which they draw their own conclusions.

The student should play an active role or part in formulating the problem, designing the research methods and planning the final product. The teacher, as the "guide on the side", helps with clarifying the problem, designing the research, and locating materials and equipment, and recommends information sources or community experts (Davis and Rimm, 1989).

It is important for students to have audiences for their Type III products. Grown-up artists, scientists, and other professionals do not keep their work to themselves. Indeed a good part of their motivation and satisfaction derives from at least a limited amount of publicity and public awareness of their accomplishments (Renzulli, Reis, and Smith, 1981). Gifted students also are product-oriented; they wish to hold up their accomplishments and to inform and perhaps influence a particular audience.

5:05 PERCEPTIONS OF THE GIFTED WITH REGARD TO EXISTING SCHOOL PROGRAMME

As mentioned in Chapter III, Section 3:04(vi) an Interview Schedule based on the school curriculum - subjects and activities offered in the school, areas of interest, kinds of activities which the gifted children would like to get involved with, methods of teaching etc. was conducted on the Very Superior and Superior children. Since the number of gifted children in the Very Superior group was small (9 in number), the Interview Schedule was conducted on all of them. In the case of the Superior group with a total of 84 students, the interview
was conducted only on 75 p.c of the total number.

The analysis of responses to some of the items in the Interview Schedule in percentage terms is shown in the following table.

**TABLE 5:05**

**TABLE SHOWING PERCENTAGE OF RESPONSES OF THE GIFTED CHILDREN WITH REGARD TO EXISTING SCHOOL PROGRAMMES:**

<table>
<thead>
<tr>
<th>Items</th>
<th>Very Superior N=9</th>
<th>Superior = 63</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Towards</td>
<td>Highly Satisfied  = 11.11%</td>
<td>Highly Satisfied = 22.22%</td>
</tr>
<tr>
<td>School</td>
<td>Moderately        = 11.11%</td>
<td>Moderately     = 14.29%</td>
</tr>
<tr>
<td>Curriculum</td>
<td>Not Satisfied     = 77.78%</td>
<td>Not Satisfied  = 63.49%</td>
</tr>
<tr>
<td>2. Working on</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groups and Projects</td>
<td>88.89%</td>
<td>87.30%</td>
</tr>
<tr>
<td>3. Interest in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Subjects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts</td>
<td>Arts              = 7.94%</td>
<td></td>
</tr>
<tr>
<td>Commerce - N11</td>
<td>Commerce - N11    = 30.16%</td>
<td></td>
</tr>
<tr>
<td>Maths.</td>
<td>Maths.            = 22.22%</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>Science           = 61.90%</td>
<td></td>
</tr>
<tr>
<td>4. Interest in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>Biology           = 4.76%</td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chemistry         = 19.04%</td>
<td></td>
</tr>
<tr>
<td>Maths.</td>
<td>Maths.            = 30.16%</td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td>Physics           = 46.04%</td>
<td></td>
</tr>
</tbody>
</table>


The above table shows the following: Most of the interviewees (77% in the Very Superior Group and 63% in the Superior Group) are not satisfied with certain areas of the school curriculum. They would be happy if studies in certain subjects could be expounded, so as to create opportunities for them to express their understanding, thinking and reasoning etc.

When asked if they would be interested to work in groups on Projects, majority of them, i.e 88% in the Very Superior Group and 87% in the Superior Group showed their interest to do so if the school provided the necessary facilities.

Regarding their interest in academic subjects, a good majority of both groups, (77% and 61% respectively) expressed preference for science subjects. Within the Science Subjects as many as 66% of Very Superior Group children and 46% of Superior group children indicated preference for Physics.

The other questions covered in the Interview Schedule pertained to facilities available in their schools - libraries, laboratories etc. Most of them expressed that their schools were not adequately equipped.

It was also expressed that attending classes which are easily managed without the help of a teacher proves to be dull and monotonous and therefore, a waste of time. To them, this could be utilized in furthering extra programmes and projects.

When asked the essential need for the presence of the teacher, most of them expressed the need especially in guiding and assisting them, while they work on projects.

5:06 ENRICHMENT PROGRAMME

Basing on the Findings of the Interview Schedule, the researcher has tried to develop Enrichment Programmes in Physics (depending on their choice of interest). The Enrichment Programmes have been
developed by drawing ideas contained in the three Models - Bloom's Cognitive Taxonomy, William's Teaching strategies for Thinking and Feeling and Renzulli's Enrichment Triad Model. The first Enrichment Programme relates with the topic "Heat", and the second one with "Renewable Sources of Energy".

5:06 A. ENRICHMENT PROGRAMME ON HEAT

Step I - Knowledge:

The first step in the Enrichment programme relates with knowledge. A good text book (such as Physics by E. White, Physics - George Gamow) is given to the students and they are asked to read on the chapter of "heat". The teacher then explains to the students certain terms like:


Step II Comprehension:

This step deals with testing student's comprehension. It could be done in the following ways:

(1) Giving them calculations using specific heat and co-efficient of linear expansion.
(ii) Asking the students to explain the terms in their own words.

Step III - General Exploratory Activities:
(1) Present to the students some aspects of Heat such as:
   (i) Loss of heat of a substance under different situations.
   (ii) Study on Evaporation
   (iii) Study on heat as Electro-magnetic Wave
   (iv) Heat and Light
   (v) Heat as a form of energy
   (vi) Expansion of substance under temperature

(2) Give them time and opportunity to explore a wide variety of content with the one they are interested in, so as to find a topic for further indepth study. (In between the teacher should ask provocative questions so as to excite and stimulate students' thinking and exploration of new ideas).

Step IV - Group Training Activities:
In this step the teacher should make use of instructional methods and techniques to help the learner to deal more effectively with content and which would also help to develop the higher levels of thinking, William's Teaching Strategies, such as Critical reading skill and Creative reading skill should be taught to the gifted children.
Critical Reading Skill requires the reader to evaluate the material for truth, authority and value and also to be able to lead to conclusions upon which one can act. Creative Reading Skill on the other hand involves an even higher level of reading and thinking. It is a thinking process in which new ideas are originated, evaluated and applied. Creative Reading involves using the printed page as a spring board to thinking and action (Greenlaw and McIntosh, 1988).

To be able to accomplish the above, the reading curriculum should have a wide variety of resources where the gifted learners will be exposed to different kinds of reference books - Encyclopedias, Dictionaries, Periodicals, Popular Science Series, Supplementary Text Books, Journals like Science Reporter, Science Age (2000 AD) etc.

Step V - Individual/Small Group Investigations

In this step the student becomes an actual investigator of a real problem or topic by using appropriate methods of inquiry.

For example: If students take up "Loss of Heat of a Substance under different situation," the steps involved would be:

(1) Students should first of all study the history of development of thermometer and thermoflask.

(11) They should then design an experiment to compare the conductivity of heat of locally available substance such as dry cloth,
dry cotton, dry paper, dry bamboo, dry wood, pine - leaves, betel nut, peel fibres etc.

(iii) Check the validity of the designed experiment - allow them to exercise their original model of experiment as far as possible even at the cost of some amount of anticipation of unreliable findings.

(iv) Ask them to collect the data very carefully and prepare a chart of conductivity of material locally available.

(v) The next step is to design an experiment to measure the heat loss of substances in containers of different materials such as copper, aluminium, glass - first without the outer layer to cover them - Secondly, by taking different materials for the outer layer to cover them (bamboo, cloth etc.)

(vi) Collect data of temperature versus time with different room temperature and graphically represent it.

(vii) Ask them to design a low cost thermometer. Set guess list of performance of the designed thermometer basing on the above finding. (For example, water of 60°C will remain not less than 50°C for a period of ten hours).
(viii) Perform the experiment with the designed thermoflask to see how far the guessed performance is true, (quality test).

Step VI - Outlets for Creation:

Present the findings in a newspaper or in a seminar or in children's magazines which routinely publish children's writings and research summaries. If possible, Children's Art Shows and Science Fair could be arranged to be as outlets for the children's or adolescents' products.

5:06 B. ENRICHMENT PROGRAMME ON ENERGY
Sub-Topic: Renewable Sources of Energy

Step-I Knowledge:

In the first step, knowledge or general awareness of energy should be given to the students. This should be based on the concept that, "Energy is the capacity of doing work". It could be done in the following manner:

(i) The teacher should inform students about energy with regard to:

(a) Common usage of the term, energy.
(b) Examples such as - we need energy for our daily life to carry out different types of works: to walk, to run, to lift an object etc. Further, an athlete needs more energy than a common man, a car needs less energy than a truck to cover the same distance.
Conclude the information given to the students that MORE THE ENERGY, MORE THE CAPACITY TO WORK, LESS THE ENERGY LESS THE CAPACITY TO DO WORK.

(ii) Allow students to consult books to find out.
(a) The relation between energy, mass and velocity.
(b) The potential energy (mgh) and Kinetic energy (\( \frac{1}{2} mv^2 \))
(c) The different types of energy, their transformation from one form to another.
(d) Unit of energy: Calorie, Watt, Joules,
(e) Different sources of energy: coal, petroleum, charcoal, electricity etc.

Step II - Comprehension
Before the pupils proceed further, comprehension is to be tested. The test will not be on how much they can memorize but it will be how far their general/qualitative understanding of energy as they learn in step I (i) agree with the qualitative mathematical formulae (in step I(ii)).

Some sample/model questions to test pupil's comprehension should be as follows:
(a) Why do we say that K.E=\( \frac{1}{2} mv^2 \)? Why not \( mv^2 \) or \( mv^3 \)?
(b) Instead of mgh, if someone says that \( m^2 gh = P.E. \), do you think that the definition of energy as capacity of doing work remains the same?
(c) Do you think that there is a system in the world where once it starts functioning, it keeps on working forever?

(d) Can a machine be 100% efficient? If Yes/No. Why?

(e) What advantages are there to measure energy in terms of calorie?

If a pupil's answer is not in agreement with the existing formulae or definition, the word "wrong" is not to be used. For example, if a pupil says that K.E. = 1/3 mv^2 (which in the book is said to be 1/2 mv^2), the pupil should not be discouraged, but should be allowed to carry on and find it for himself. (Of course, care is to be taken that the pupil does not draw conclusions from incomplete/discontinuous premises).

Step III - General Exploratory Activities

Present to the students some aspects on energy such as:

(a) Utilisation of energy or energy consumption

(b) Misutilisation of energy

(c) Variation of wind speed

(d) Radiant energy from the sun (solar heat)

(e) Method of waste disposal/toilet system and estimation of energy which is to be obtained from the biomass conversion of the human excreta.
Give them time and opportunity to explore a wide variety of content with the one they are interested in, so as to find a topic for further indepth study.

Step IV - Group Training Activities

In this step the teacher should make use of instructional methods and techniques to help the learner to deal more effectively with content and which would also help to develop the high levels of thinking. Some of the teaching strategies suggested by William should be made use. These are:

(a) Provocative questions
(b) Skills of search
(c) Tolerance for ambiguity
(d) Intuitive expression
(e) Adjustment to development
(f) Evaluation of situation
(g) Creative Reading Skill
(h) Creative Writing Skill
(i) Visualization Skill

Step V - Individual/Small Group Investigations

Characteristics:

(a) It must be voluntary
(b) Groups/Individual must be coordinated
(c) Based on the particular activities, extra knowledge is to be provided by the teacher concerned (if necessary).
(d) In case of survey, necessary permission and legal formalities are to be completed prior to the commencement of the projects.

Some Suggested Activities

Utilisation of Energy:

1. Statistical data available easily like Petrol consumption in India from 1960 to 1980 per year (b) Daily energy consumption of a person.

2. Data should be analysed and represented graphically showing calendar years versus energy consumption of the nation, persons versus energy consumption.

3. Make them aware of different levels of energy utilisation in different types of machine (degree of efficiency).

   e.g Machine  | Consumptions  
   (a) HERO HONDA | 80 Km/1 litre  
   100 cc Bike    |             
   (b) Scooter Bajaj Super | 35 Km/1 litre  
   150 cc         |

B. Survey on energy consumption

1. Select 3 houses of affluent class
   3 houses of upper middle class in urban set-up
   3 houses of lower middle class

2. Collect electricity bill, water bill, shopping bills for 3 months. Make a survey of types of fuels used.
3. Prepare a report on energy consumption level, types of fuel, population level - suggest some remedial measures.

4. Do the same activities in rural set up.
   Prepare a comparative study report on it.

C. Survey of Electrical Energy Consumption in a Particular Locality

1. Select a particular area

2. Contact State Electricity Board Billing Section to collect data of billing for last 10 years.

3. Draw graph of Bill vs months of the years - Bill versus years.

4. Choose 3 establishments with very high, medium, low billing.

5. With due permission, make a survey on how they utilise the energy.

6. Suggest ways and means to minimise the consumption with alternative sources of energy such as solar water heater, windmill water pump, fanless-well ventilated room, zero level dim light etc.

7. Prepare a report to be submitted.

D. Survey on Misutilisation of Energy:

1. List out all the misutilisation/inefficient way of utilising energy e.g. A lot of smoke/unburned carbon in exhaust pipes of vehicles, not using pressure cooker, tube light etc.
   
   (b) Estimate the total loss of energy

   (c) List out its harmful environmental effect.

   (d) Suggest Remedies

   (e) Prepare a report
E. Non-Conventional Sources of Energy:

(a) The teacher concerned or an official from Non-conventional Energy Department, or an expert from University could be invited for a lecture on "Present trend in Non-conventional Sources of Energy."

(b) Students are given access to the current research findings and latest development of design of non-conventional energy sources in their chosen area.

(c) In consultation with the students involved some projects are listed e.g. windmill, solar cooker, biomass etc.

(d) Any innovative idea towards the saving of energy by improving/renovating/reforming the already existed system or machines to be encouraged.

F. Modelling:

(If student/students choose a project e.g. Windmill).

Tools to be provided: wooden saw, file, blade, scissor, knife, hammer, cellotape, gum, card paper etc.

Teacher's Role: A teacher must act as an assistant, not as a supervisor, he must suggest and not overrule/dictate except when it is for safety.

Steps involved:

(a) The student should first make a static model of a windmill.

(b) Based on this static/semi-working/working (mini) model, provisions should be made for the student to interact with experts in the field to help the child sharpen his abilities. (Any kind of
disagreements should not end in arguments but the child should be helped to complete the model with design, calculation and verification).

(c) All necessary knowledge (higher level) to be involved in the process of making the pilot project is to be taught to the pupils.

(d) With necessary arrangement of financial assistance, the student should be instructed to make a working model.

Step VI - Outlets for creation:

(a) Present the findings in a seminar

(b) Present findings in Children's Magazines which routinely publish children's writings and research summaries. If possible, arrange for Children's Art Shows or Science Fair to be as outlet for the Children's or Adolescent's products.

(c) Based on the interest of the student, it is the duty of the teacher to decide whether a life-size pilot project of the same should be made.