Abstract

Many factors influence students learning. Cognitive factors like intelligence, creativity and memory, affective factors like motivation, social factors like maturation, age, sex, social background and study habits are of great relevance to learning (J.K. Pillai 1998). Good study habits are increasingly important as the child grows older and takes responsibility for his own learning. The family also, at times, instead of being breeding centre for love and affection may be the centre for creating tensions, conflicts and frustrations. There may be sibling rivalry, parental rejection, and unhealthy family atmosphere. Many other social factors may create a sense of insecurity in the student. Economic stress, taboos, restrictions, competition, rivalry are a few stumbling blocks in a student’s achievement. These things may affect the behaviour of the student in school. Further, it leads to emotions and frustrations. Conducting counseling sessions can help student to modify emotions. Research reports in India indicate that students seek help of parents and elders to solve their educational problems. These indicate that there is a great need for counseling in schools in India. Our aim of classroom instruction is to optimize the learning outcome. The proper processing in students memory depends upon the amount of information received, quality of processing and the ways of processing. Using memory strategies are decrease the load on the child’s information processing system by increasing the efficiency of each process, thus, freeing up space for other tasks. In this study the investigator attempted to give a package of counseling sessions to parents and students and suitable strategy training programmes to students. Due to these intervention strategies the students’ learning difficulties were minimized and the achievement levels have been increased considerably.
I. INTRODUCTION

Many factors influence students learning. Cognitive factors like intelligence, creativity and memory, affective factors like motivation, social factors like maturation, age, sex, social background and study habits are of great relevance to learning (J.K. Pillai 1998). Good study habits are increasingly important as the child grows older and takes responsibility for his own learning. The National Policy on Education (1986) emphasized the need for change in the teachers’ outlook of teaching and dissemination of instruction. It also emphasized the necessity of identifying the problems of the learners and for planning the learning activities using innovative methods for effective dissemination of instruction. Receiving all the information, instructed in the classroom, depends upon the readiness of the learner. It can be determined by emotions, social background, peers, family situation, etc. The importance of family involvement in the elementary school years can be strengthened with positive results for children and their school success. Parents impart the self-regulation skills that have a lasting effect on their children's ability to relate positively with their peers and to attend and participate in class activities.

1.1 Responsibility for Learning Outcomes

  - Supporting literacy: Parent involvement in reading-related activities with their children outside of school is strongly related to children's reading performance.
  - Helping with homework: Parents' involvement in their children's homework can make a difference. When parents guide their children's homework with helpful and appropriate support, children perform better in the classroom. The home environment, including the types of materials and resources parents provide, also affects children's educational outcomes.
  - Managing children's education: Parents manage and coordinate the different environments—home, school, and community—in which their children learn and develop. When parents manage their children's education by being involved both at home and in school, they affect children's literacy achievement over time through children's feelings about literacy.
  - Maintaining high expectations: As children progress through the elementary school years, the educational expectations that parents hold for them become increasingly important.

- Integrate family involvement as part of the elementary school instructional strategy. Hoover-Dempsey, K. V. et.al.,(2006) stated that Elementary school administrators and teachers often perceive family involvement as an “add on” to school activities rather than part of a key instructional strategy. However, family involvement is one way to make teaching more effective.

The family also, at times, instead of being breeding centre for love and affection may be the centre for creating tensions, conflicts and frustrations. There may be sibling rivalry,
parental rejection, and unhealthy family atmosphere. Many other social factors may create a sense of insecurity in the student. Economic stress, taboos, restrictions, competition, rivalry are a few stumbling blocks in a student’s achievement. These things may affect the behaviour of the student in school. Further, it leads to emotions and frustrations. Conducting counselling sessions can help student to modify emotions. Hence the need for student counseling is imminent. The role of counseling is to sensitise the individual to his potential to determine what he would like to be as an individual. It helps the pupils to understand and classify their views of their life space and to learn to reach their self-determined goals through meaningful. If pupils are denied the opportunity of assimilating the reality of what has happened to them, they may experience acute stress subsequent to the event.

1.2 Counselling on Family therapy
The goal of the family counseling is not merely to remove some symptoms but to create a new way of living. This involves helping people to express emotion. Nathan Ackerman (1958) places enormous emphasis on this approach and the relationship between the individual, family and other social systems is considered to be important in the ecology of human development. He introduced the concept of inter-locking pathologies, whereby the problems of one family member are ties up with interactions with other members. Murray Bowen (1958) introduced the concept of fusion. Fusion means that various family members cannot act independently of one another and are stuck together forming a vogue, amorphous mess. These two concepts are involved in family counselling.

1.3 Implementation of intervention strategies
In these lines the investigator attempted a study on finding difficulties on learning science at high school level. In this study, twelve students were selected from IX standard rural backgrounds high school those who are in low achievement level. The students were asked to narrate their learning difficulties without any fear and hesitation. On the basis of students’ statements, the factors related to lower achievement can be assumed with family-related factors, peer-related factors, school-related factors, class room instruction related factors. To over come all these difficulties, a multi-dimensional approach is needed. The investigator attempted to give a package of counselling sessions to parents and students and suitable strategy training programmes to students for three months. A pre-test and post-test were conducted at the beginning and end of the programme. By comparing these two tests the students’ achievement level has been increased considerably. The counseling sessions and strategy training programmes are significant in facilitating science learning. Hence, these programmes could be implemented for improving the quality of learning.

II. OBJECTIVES OF THE STUDY
i. To identify the difficulties perceived by the students in learning science.
ii. To prepare a remedial package to overcome the learning difficulties.
iii. To find out the effect of remedial package on achievement in learning science.
III. HYPOTHESIS OF THE STUDY

Counselling sessions and Strategy training packages significantly improve the achievement of IX standard students in science learning.

IV. RESEARCH PROCEDURE

4.1 Tool for the study

i. Tool for identification of problem: Initially the low achieving students were identified. Then the students were asked to narrate their difficulties in classroom learning. They were instructed to be free to express their difficulties. They were assured the confidentiality of their statements.

ii. Achievement tests were used for the purpose of pre-test and post-test: Achievement test was constructed and validated by the investigator. The test included questions of objective type and short answer questions.

4.2 Reliability of the Tool

The reliability of the test was found by parallel form method and it was found to be 0.84 which was significant.

4.3 Sample for the study

The present study was carried out Govt. Higher Secondary School, Thirukogarnam, Pudukottai district, in Tamil Nadu. Twelve low achieving students were selected from standard IX of the school formed as a sample for this study. Quarterly examination marks in science were taken as a basis for the selection.

4.4 Methodology of the study

In this study, all the twelve students faced different problems. Hence, the investigator decided to choose case study method. All the twelve students were dealt with individually.

V. CONDUCTING THE EXPERIMENT

All the twelve low scoring students were grouped and they were asked to express their difficulties in learning science. They were instructed to be free to express their difficulties in learning science. They were assured the confidentiality of their statements. As a whole, 16 valuable statements were expressed. Most of the students expressed that they understand clearly in the classroom but cannot recall it the other day or even on the same day. Some needed training on memory strategies to enhance the level of Information Processing. Some needed family therapy counseling to the parents; some other needed peer influence counseling to the students.

It was found that eight students expressed retrieval failure. Hence, they were grouped separately and were given training on memory strategies. It included rehearsing, keyword method, imagery and chunking for the period of four weeks. Each student had more than one problem. Hence, each student was dealt with individually and the suitable counseling sessions were conducted separately to the parents and students.
### Table 1: Programme of Remedial packages to the Students

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Problems</th>
<th>Frequency</th>
<th>Remedial Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bullying by the peers</td>
<td>5</td>
<td>Counselling on peer influences to students to understand to avoid antisocial activities</td>
</tr>
<tr>
<td>2</td>
<td>Noise in the classroom.</td>
<td>2</td>
<td>Counselling on motivation to students to avoid noise</td>
</tr>
<tr>
<td>3</td>
<td>Discouraging by the peers</td>
<td>2</td>
<td>Counselling on peer influence to students to understand the value clause and understand time management</td>
</tr>
<tr>
<td>4</td>
<td>Unnecessary talking</td>
<td>2</td>
<td>Counselling on motivation to students to understand time management</td>
</tr>
<tr>
<td>5</td>
<td>Frequent visits of relatives and friends</td>
<td>3</td>
<td>Counselling on family therapy to students and parents to understand to give priority to studies</td>
</tr>
<tr>
<td>6</td>
<td>Watching TV by other family members</td>
<td>2</td>
<td>Counselling on family therapy to students and parents to understand to develop adjustability</td>
</tr>
</tbody>
</table>

1. **Bullying**  
   Three students complained that they were not able to concentrate on studies due to bullying by peers.  
   Peer influence counseling was organized for the students to understand the psychological impact received by the individual due to bullying and to avoid bullying like antisocial activities.

2. **Noise**  
   Two students complained that they were not able to concentrate on studies in leisure periods due to the noise produced by peers.  
   Lack of motivation is one of the reasons for producing noise. A suitable counseling session was organized to the students. They were made to know the healthy peer relationship as a necessity for human development.

3. **Discouraging**  
   One student expressed his inability to concentrate on studies due to the discouraging words from his peers.  
   A counseling session on peer influence was organized to the student. He was made to understand social and antisocial activities in peer influences and to understand the value clauses. The student was given training to overcome value clauses and to take right decision.

4. **Unnecessary talking**  
   One student complained that he could not concentrate on studies due to unnecessary talking of his peers.  
   This problem is due to lack of motivation. A counseling session on peer influence was organized to the students. In which, they were made to understand to give respect others’ feelings and the value of time.
5. **Frequent visits of relatives and friends**
One student narrated his inability to concentrate on studies due to the frequent visits of relatives and friends. 
A counseling session was organized to the student and his parents. They were made to understand the interlocking pathologies in family therapy and to give importance to their son’s studies. The concept of interlocking pathologies is the problem of one family member tied up with interaction with other members. Further, the parents were made to know how to minimize the disturbances produce by the guests.

6. **Watching Television by other family members**
One student expressed his inability to concentrate on studies due to the disturbances produced by other family members by watching television.
A counseling session was organized to the student and his parents to understand the interlocking pathologies in family therapy and to give importance to their son’s studies. Further, the student was motivated to avoid eagerness for viewing television.

### VI. DATA ANALYSIS
After completing the remedial package programme a post-test was conducted. Quarterly exam marks were taken as pre-test scores. The students’ pre-test and post-test scores were tabulated and analyzed. Mean and standard deviation were calculated. Will coxon’s matched pair signed ranks test were used to find out the impact of the programme.

**Table 2: Mean and standard deviation scores of students in the pre-test and post-test**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test</th>
<th>No of Students</th>
<th>Mean</th>
<th>S.D</th>
<th>Overall Mean</th>
<th>Overall S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pre-test</td>
<td>12</td>
<td>28.4</td>
<td>5.98</td>
<td>53.5</td>
<td>8.4</td>
</tr>
<tr>
<td>2</td>
<td>Post-test</td>
<td>12</td>
<td>57.8</td>
<td>7.12</td>
<td>54.8</td>
<td>7.8</td>
</tr>
</tbody>
</table>

The mean scores of the pre-test was less than that of the class average marks. The mean scores of the post-test were greater than that of the class average marks.

**Table 3: Will Coxon’s signed ranks test on comparing the mean difference between the post-test and the pre-test scores**

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Experimental group</th>
<th>Difference</th>
<th>Absolute difference</th>
<th>rank of R(+)</th>
<th>R(+)</th>
<th>R(-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pre-test Scores</td>
<td>33</td>
<td>8</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Post-test Scores</td>
<td>38</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>28</td>
<td>41</td>
<td>12</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td>26</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>18</td>
<td>31</td>
<td>6.5</td>
<td>6.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>35</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>33</td>
<td>35</td>
<td>9</td>
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<tr>
<td>8</td>
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<td>3</td>
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<tr>
<td>9</td>
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<td>18</td>
<td>2</td>
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<tr>
<td>10</td>
<td>29</td>
<td>23</td>
<td>4</td>
<td>4</td>
<td></td>
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</tr>
</tbody>
</table>
The calculated value $z = 3.06$ is greater than the theoretical value 1.96 at 0.025 level of significance. There is significant mean difference between the pre-test and post-test scores of students. It is concluded that the students’ achievement in science had improved after implementing remedial package.

VII. MAJOR FINDINGS
The following are the major findings of the study
1. The students’ performance in post-test mean (57.8) is higher than that of the pre-test mean (28.4). This difference in achievement was due to the effect of the remedial package programme.
2. There is significant mean difference between the pre-test and post-test in the students’ performance as the calculated value of Will coxon’s signed rank test (3.06) is greater than the critical value (1.96) at 0.025 level. Hence, the students’ achievement has significantly increased in the post-test than that of the pre-test.

VIII. CONCLUSION
Over the high school years, children become more autonomous than in early childhood and develop relationships with a wider array of people, including peers and teachers. Children also begin to establish competence in a variety of domains. The three family involvement processes of parenting, home–school relationships, and responsibility for learning are critical to these developmental milestones. High schools have responsibilities to encourage these family involvement processes, and when they do, schools can benefit from their outcomes. For example, parenting that is warm and supported by diverse social networks promotes children's social skills and appropriate classroom behaviors. Home–school relationships characterized by bilateral communication and opportunities for participation in school events and formal parent involvement programs are predictive of children's interest in reading and math, as well as improvements in reading and math achievement. Lastly, when parents take responsibility for children's learning outcomes—including by supporting literacy and homework, managing children's education, and maintaining high expectations—children's motivation and academic competence improves.

IX. REFERENCES


