Self-Concept, Study Habit and Academic Achievement of Students

Dr. S. Chamundeswari
(Corresponding Author)
Associate Professor,
N.K.T. National College of Education for Women,
Chennai, Tamilnadu, India
rajchamu2006@yahoo.co.in

V. Sridevi
Assistant Professor,
N.K.T. National College of Education for Women,
Chennai, Tamilnadu, India
srideviv10@yahoo.com

Archana Kumari
Assistant Professor
N.K.T. National College of Education for Women,
Chennai, Tamilnadu, India.
archanapandey14@gmail.com

Abstract: The present study investigates the relationship between self-concept, study habit and academic achievement of students. Survey method is used to select a sample of 381 students at the higher secondary level. The Self-concept Inventory (Deo, 1985) is used to study self-concept, Study Habits Inventory (Gopal Rao, 1974) is used to assess study habit, and academic achievement marks scored by students in their quarterly examination were taken for academic achievement scores. The results of the statistical analyses show a significant correlation between self-concept, study habit and academic achievement of students. A significant difference is found between students at the higher secondary level in state, matriculation and central board schools, pertaining to self-concept, study habit and academic achievement.

Keywords: Self-concept, Study Habit, Academic Achievement

1. INTRODUCTION

The general meaning of conscious reflection is a state of awareness or of being aware of an external object or something within oneself. Franken (1994), in his research, concludes that self-concept is the basis for all motivated behaviour. According to Aristotle, habit is what we repeatedly do. Habits generate other habits. Inspiration is what gets us started, motivation is what keeps us on track, and habit is what makes us automatic. Anything we practice long enough becomes ingrained into our system and becomes a habit. Students are basically having their own individual differences. It all depends upon their ability and capacity. We do observe that some students have the habit of studying daily lessons regularly. Academic achievement refers to the level of schooling which has been successfully completed and ability to attain success in studies. It is also defined as excellence in all academic discipline rather than fatalistically accepting it and competing against some standard of excellence.

Most of our present student population is under achievers because they pay only less time for their educational task. Some crucial emotional competencies, like, lack of self-concept, unsatisfactory study habits which impress their educational attainment is not at all good both at the micro level and as well as the macro level. Therefore, a need is felt to investigate the variables, self-concept, study habit and academic achievement of students. Once the level of the influence in estimated
empirically, then the researches can authentically persuade the authorities and agencies involved in planning, implementing and evaluating school education to take appropriate steps in cultivating good study habits and self concept to enhance the academic performance of students. Hence this vital area for the present investigation has been selected.

2. REVIEW OF RELATED LITERATURE

For any researcher, it need not be emphasized that the review of studies related to his area of investigation is essential, but providing information of what has already been done in the field gives direction to the present study. The purpose of the investigation is to study the self-concept, study habits and academic achievement of students at the higher secondary level in different systems of education. Studies reviewed pertaining to the present study have been compiled and presented below under appropriate headings.

2.1 Studies Related to Self-concept and Academic Achievement

Pujar and Gaonkar (1997) investigated the influence of age and type of family on self-concept of 142 high and 142 low achieving adolescents. The sample consisted of 8th, 9th and 10th standard students. The study revealed that with the advancement of age, the level of self-concept increased among high and low achievers.

Sood (2006) investigated the educational choice in relation to academic stress, achievement motivation and academic self-concept. There were 90 boys and 90 girls. They varied in age from 17 – 19 years. The results reported that subjects who had high achievement motivation had a high academic self-concept.

2.2 Studies Related to Study Habits and Academic Achievement

Aluede and Onolemhemhen (2001) studied the effect of study habit counselling on the academic performance of secondary schools students in English language. The multi-stage stratified sampling method was used. The study habit inventory (Bakare, 1970) was taken. The findings of the study were counselling students on good study habits to bring about improvement in the students’ academic performance.

Suneetha and Mayuri (2001) conducted a study on age and gender differences on the factors affecting high academic achievement of school children. The total sample of the study comprised of 120 children of IX and X grade drawn purposively from 10 private schools of Hyderabad. The results showed boys and girls differed significantly in drilling, interaction, sets and language dimensions of the study habit inventory.

Sirohi (2004) conducted a study of under achievement in relation to study habits and attitudes. A sample of 1000 elementary grade students were taken from X composite schools of South District, Delhi. The results found that guidance program lead to better results, improving the achievement of the students and thus their potentialities are maximally utilized.

Sud and Sujata (2006) conducted a study on academic performance in relation to self-handicapping, test anxiety and study habits of high school children (n=200) from government senior secondary school of Himachal Pradesh. The results revealed that boys were poorer in study habits than girls.

2.3 Critique

The above discussed studies indicated that self-concept and study habits did influence academic achievement of students. Studies pertaining to self-concept, study habits and academic achievement based on gender difference are not clear and necessitated further investigation.

3. STATEMENT OF THE PROBLEM

This study has its primary objective to assess the self-concept, study habit and their relationship to performance outcomes. Specifically, the study was organized around the following questions:

(i) Are the variables, self-concept, study habit, and academic achievement significantly correlated between them?
(ii) Do the students in different systems of education, namely, state, matriculation and central board schools differ in the self-concept, study habits and academic achievement?
Self-Concept, Study Habit and Academic Achievement of Students

Based on the review of related literature and the research questions, the study is undertaken keeping the following objectives in mind:

(i) To investigate if there is any significant relationship between the select variables of students in state, matriculation and central board schools at the higher secondary level;
(ii) To investigate if there is any significant difference in self-concept, study habit and academic achievement of students in state, matriculation and central board schools at the higher secondary level and
(iii) To investigate if there is any significant difference in the self-concept, study habit and academic achievement of boys and girls in state, matriculation and central board schools at the higher secondary level.

4. HYPOTHESIS FORMULATED

Based on the objectives and review of literature, the following hypotheses have been formulated:

(i) There is no significant relationship between the select variables of students in state, matriculation and central board schools at the higher secondary level;
(ii) There is no significant difference in self-concept, study habit and academic achievement of students in state, matriculation and central board schools at the higher secondary level and
(iii) There is no significant difference in the self-concept, study habit and academic achievement of boys and girls in state, matriculation and central board schools at the higher secondary level.

5. METHOD OF INVESTIGATION

As the method of investigation is designed on the basis of the problem, objectives and hypotheses formulated, it warrants a psychometrically sound design, procedure, tools and execution. The investigation is planned to verify hypotheses using suitable tools and appropriate statistics for data processing.

5.1 Research Design

The present study deals with the analysis of the self-concept, study habit, and academic achievement of students in different systems namely, state, matriculation and central board schools at the higher secondary level.

5.2 Sample Selected

From the target population, a sample of 336 students is chosen from the higher secondary level studying in different systems of education, namely, state, matriculation and central board schools. The chosen sample comprises 118 students from state, 114 students from matriculation and 104 students from central board schools.

5.3 Tools Used for the Study

The research tools used for the present study to analyze the self-concept, the study habit and academic achievement of students in different systems of education at the higher secondary level are as follows:

(i) Self-concept Inventory (Deo, 1985)
(ii) Study Habits Inventory (Gopal Rao, 1974)

The marks scored by the students in the quarterly examination were taken as a measure of academic achievement.

6. ANALYSES OF DATA

The results of the analyses of data collected are compiled and presented in tables below.

Table I. Analysis of Correlation between the Select Variables of Students at the Higher Secondary Level

<table>
<thead>
<tr>
<th></th>
<th>Self-concept</th>
<th>Study Habit</th>
<th>Academic Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-concept</td>
<td>1</td>
<td>0.35**</td>
<td>0.88**</td>
</tr>
<tr>
<td>Study Habit</td>
<td>x</td>
<td>1</td>
<td>0.36**</td>
</tr>
<tr>
<td>Academic Achievement</td>
<td>x</td>
<td>x</td>
<td>1</td>
</tr>
</tbody>
</table>
In the above table (Table-1), it is seen that there exists a significant correlation between self-concept, study habit and academic achievement among students at the higher secondary level.

**Table 2. Analysis of Variance of Self-concept, Study Habit and Academic Achievement of Students in different Categories of Schools at the Higher Secondary Level**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Source of Variation</th>
<th>df</th>
<th>Sum of Square</th>
<th>Mean of Sum of Square</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-concept</td>
<td>Between groups</td>
<td>2</td>
<td>96160.34</td>
<td>48080.17</td>
<td>17.11</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>333</td>
<td>935966.82</td>
<td>2810.71</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>335</td>
<td>1032127.16</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Study Habit</td>
<td>Between groups</td>
<td>2</td>
<td>424818.98</td>
<td>212409.49</td>
<td>936.55</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>333</td>
<td>75524.68</td>
<td>226.80</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>335</td>
<td>500343.67</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Academic Achievement</td>
<td>Between groups</td>
<td>2</td>
<td>6963.40</td>
<td>3481.70</td>
<td>17.74</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>333</td>
<td>65370.27</td>
<td>196.31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>335</td>
<td>72333.67</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**Table-2a. Statistical Analysis of Means of Self-concept of Students in State, Matriculation and Central Board Schools at the Higher Secondary Level**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sample Size</th>
<th>Mean</th>
<th>SD</th>
<th>SEM</th>
<th>SED</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Board</td>
<td>118</td>
<td>204.26</td>
<td>46.35</td>
<td>4.26</td>
<td>6.86</td>
<td>3.64**</td>
</tr>
<tr>
<td>Matriculation Board</td>
<td>114</td>
<td>229.25</td>
<td>57.30</td>
<td>5.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Board</td>
<td>118</td>
<td>204.26</td>
<td>46.35</td>
<td>4.27</td>
<td>6.89</td>
<td>5.98**</td>
</tr>
<tr>
<td>Central Board</td>
<td>104</td>
<td>245.44</td>
<td>55.18</td>
<td>5.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matriculation Board</td>
<td>114</td>
<td>229.25</td>
<td>57.30</td>
<td>5.37</td>
<td>7.62</td>
<td>2.13*</td>
</tr>
<tr>
<td>Central Board</td>
<td>104</td>
<td>245.44</td>
<td>55.18</td>
<td>5.42</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at 0.01 level**

In Table-2, for the analysis of variance different categories of schools are treated as different groups. The F-ratios are found to be significant at 0.01 level. Thus there is a significant difference in self-concept, study habit and academic achievement of students in different categories of schools at the higher secondary level.

In order to establish the actual degree of difference between students belonging to different categories of schools namely, state, matriculation and central board schools, critical ratios are worked out and the actual difference between the mean scores are established. The tables (Table-2a to Table-2c) presented below thus indicate the mean difference between students in the different categories of schools at the higher secondary level.

**Significant at 0.01 level**

SD-Standard Deviation
Self-Concept, Study Habit and Academic Achievement of Students

SEM-Standard Error of Mean
SED-Standard Error of Difference
CR-Critical Ratio

In Table-2a, it is evident that students in central board schools are significantly better in their self-concept when compared to students in other two categories of schools, state and matriculation board schools at the higher secondary level.

Table 2b. Statistical Analysis of Means of Study Habit of Students in State, Matriculation and Central Board Schools at the Higher Secondary Level

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sample Size</th>
<th>Mean</th>
<th>SD</th>
<th>SEM</th>
<th>SED</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Board</td>
<td>118</td>
<td>73.08</td>
<td>15.40</td>
<td>1.42</td>
<td>1.99</td>
<td>22.86**</td>
</tr>
<tr>
<td>Matriculation Board</td>
<td>114</td>
<td>118.51</td>
<td>14.86</td>
<td>1.39</td>
<td>2.04</td>
<td>43.01**</td>
</tr>
<tr>
<td>State Board</td>
<td>118</td>
<td>73.08</td>
<td>15.40</td>
<td>1.42</td>
<td>2.01</td>
<td>20.87**</td>
</tr>
<tr>
<td>Central Board</td>
<td>104</td>
<td>160.60</td>
<td>14.88</td>
<td>1.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matriculation Board</td>
<td>114</td>
<td>118.51</td>
<td>14.86</td>
<td>1.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Board</td>
<td>104</td>
<td>160.60</td>
<td>14.88</td>
<td>1.46</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at 0.01 level
SD-Standard Deviation
SEM-Standard Error of Mean
SED-Standard Error of Difference
CR-Critical Ratio

In Table-2b, it is evident that students in central board schools are significantly better in their study habit when compared to students in other two categories of schools, state and matriculation board schools at the higher secondary level.

Table 2c. Statistical Analysis of Means of Academic Achievement of Students in State, Matriculation and Central Board Schools at the Higher Secondary Level

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sample Size</th>
<th>Mean</th>
<th>SD</th>
<th>SEM</th>
<th>SED</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Board</td>
<td>118</td>
<td>58.02</td>
<td>13.53</td>
<td>1.25</td>
<td>1.85</td>
<td>4.05**</td>
</tr>
<tr>
<td>Matriculation Board</td>
<td>114</td>
<td>65.48</td>
<td>14.54</td>
<td>1.36</td>
<td>1.85</td>
<td>5.88**</td>
</tr>
<tr>
<td>State Board</td>
<td>118</td>
<td>58.02</td>
<td>13.52</td>
<td>1.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Board</td>
<td>104</td>
<td>68.89</td>
<td>13.97</td>
<td>1.37</td>
<td>1.93</td>
<td>1.77NS</td>
</tr>
<tr>
<td>Matriculation Board</td>
<td>114</td>
<td>65.48</td>
<td>14.54</td>
<td>1.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Board</td>
<td>104</td>
<td>68.89</td>
<td>13.97</td>
<td>1.37</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at 0.01 level
SD-Standard Deviation
SEM-Standard Error of Mean
SED-Standard Error of Difference
CR-Critical Ratio

In Table-2c, it is evident that students in central board schools are significantly better in their academic achievement when compared to students in other two categories of schools, state and matriculation board schools at the higher secondary level.

Table 3a. Statistical Analysis of Means of Self-concept, Study Habits and Academic Achievement of Boys and Girls in State Board Schools at the Higher Secondary Level

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>Sample Size</th>
<th>Mean</th>
<th>SD</th>
<th>SEM</th>
<th>SED</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-concept</td>
<td>Boys</td>
<td>65</td>
<td>197.70</td>
<td>42.53</td>
<td>5.28</td>
<td>8.65</td>
<td>1.69NS</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>53</td>
<td>212.31</td>
<td>49.88</td>
<td>6.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Habits</td>
<td>Boys</td>
<td>65</td>
<td>63.06</td>
<td>9.24</td>
<td>1.15</td>
<td>2.03</td>
<td>10.98**</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>53</td>
<td>85.38</td>
<td>12.22</td>
<td>1.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Achievement</td>
<td>Boys</td>
<td>65</td>
<td>55.62</td>
<td>13.01</td>
<td>1.70</td>
<td>2.45</td>
<td>2.18*</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>53</td>
<td>60.96</td>
<td>12.83</td>
<td>1.76</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at 0.01 level
SD-Standard Deviation
Dr. S. Chamundeswari et al.

SEM-Standard Error of Mean  
SED-Standard Error of Difference  
CR-Critical Ratio

In the above table (Table-3a), it is seen that the girls are significantly better than the boys in the same state board schools with respect to all variables, self-concept, study habit and academic achievement.

**Table 3b. Statistical Analysis of Means of Self-concept, Study Habits and Academic Achievement of Boys and Girls in Matriculation Board Schools at the Higher Secondary Level**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>Sample Size</th>
<th>Mean</th>
<th>SD</th>
<th>SEM</th>
<th>SED</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-concept</td>
<td>Boys</td>
<td>60</td>
<td>218.13</td>
<td>52.41</td>
<td>6.77</td>
<td>10.65</td>
<td>2.21*</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>54</td>
<td>241.60</td>
<td>60.38</td>
<td>8.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Habits</td>
<td>Boys</td>
<td>60</td>
<td>106.92</td>
<td>9.00</td>
<td>1.16</td>
<td>1.57</td>
<td>15.64**</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>54</td>
<td>131.39</td>
<td>7.71</td>
<td>1.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Achievement</td>
<td>Boys</td>
<td>60</td>
<td>62.25</td>
<td>13.61</td>
<td>7.76</td>
<td>2.67</td>
<td>2.55**</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>54</td>
<td>69.07</td>
<td>14.81</td>
<td>2.02</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at 0.01 level**  
SD-Standard Deviation  
SEM-Standard Error of Mean  
SED-Standard Error of Difference  
CR-Critical Ratio

In the above table (Table-3b), it is seen that the girls are significantly better than the boys in the same matriculation board schools with respect to all variables, self-concept, study habit and academic achievement.

**Table 3c. Statistical Analysis of Means of Self-concept, Study Habits and Academic Achievement of Boys and Girls in Central Board Schools at the Higher Secondary Level**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>Sample Size</th>
<th>Mean</th>
<th>SD</th>
<th>SEM</th>
<th>SED</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-concept</td>
<td>Boys</td>
<td>43</td>
<td>229.27</td>
<td>57.49</td>
<td>8.77</td>
<td>10.93</td>
<td>2.58**</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>61</td>
<td>256.84</td>
<td>50.94</td>
<td>6.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Habits</td>
<td>Boys</td>
<td>43</td>
<td>150.23</td>
<td>15.70</td>
<td>2.39</td>
<td>2.64</td>
<td>7.33**</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>61</td>
<td>167.90</td>
<td>8.74</td>
<td>1.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Achievement</td>
<td>Boys</td>
<td>43</td>
<td>64.16</td>
<td>15.47</td>
<td>2.36</td>
<td>2.80</td>
<td>2.88**</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>61</td>
<td>72.23</td>
<td>11.83</td>
<td>1.51</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at 0.01 level**  
SD-Standard Deviation  
SEM-Standard Error of Mean  
SED-Standard Error of Difference  
CR-Critical Ratio

In the above table (Table-3c), it is seen that the girls are significantly better than the boys in the same central board schools with respect to all variables, self-concept, study habit and academic achievement.

**7. DISCUSSION**

Interest in self-concept is not a modern phenomenon. Man had wondered about himself since time immemorial. Throughout centuries, this interest had never really waned. Efforts dispensed ranged from pure theoretical formulations to scientific experimentations. Hence, it can be said that self-concept has long captivated the attention of philosophers, sociologists and psychologists. Since the beginning of this century, there is a proliferation of research dealing with self-concept and studies of the relationship between self-concept and achievement in educational settings have been a major focus of research and theory for many years (Burns, 1979; Marsh and others, 1988; Hattie, 1992; Hamachek, 1995; House, 1996). Research has supported the belief that there is a persistent and significant relation between the self-concept and academic achievement, and the change in one seems to be associated with a change in other (Felson, 1984; Marsh, 1993; Marsh and Craven, 1997). Another important variable found to be determining the academic
Self-Concept, Study Habit and Academic Achievement of Students

The performance of students is study habits. According to Charles Bird (1993, study habits play an important role in influencing academic success of students.

In the present study, it is found that there is a significant difference in the self-concept among the students in different categories of schools following different systems of education, namely, state, matriculation and central board schools of the higher secondary schools. The students belonging to the matriculation board schools are found to be significantly higher in their self-concept when compared to the students in the state board schools and similarly the students in central board schools are found to be significantly better in their self-concept, when compared to the students in the other two boards, namely the state and the matriculation board schools at the higher secondary level. This is because the students in matriculation board schools come from better socio-economic conditions when compared to their counter parts in the state board schools and also parents of the students in matriculation board schools are better educated and better placed than the parents of the state board schools. Infrastructure facilities at home, home environment and the attitude of these children in matriculation schools are very much better when compared to their counter parts in state board schools. The facilities in the matriculation schools and the nature of the syllabus also contribute a lot towards the better self-concept of the students. Thus, the children in the matriculation schools are significantly better in their self-concept than the children in state board schools and similarly, the students in central board schools have significantly better home and school environment and parental support when compared to the students in matriculation and state board schools. A similar influence is seen in the case of study habits also.

It is also been found that there is a significant difference in the academic achievement among students in the three different categories of schools following different systems of education, namely the state, the matriculation and the central board schools students at the higher secondary level. Students at the matriculation board are significantly better in their academic achievement when compared to their counter parts in state board schools and students of the central board schools are significantly better than those of the matriculation board schools. The reason can be attributed to the fact that the matriculation and central board students have significantly better facilities at school and a better home and school environment. Thus, these children are significantly better in their self-concept leading to significantly better academic achievement when compared to the children in state board schools at the higher secondary level. It is also concluded from the study that girls at the higher secondary level irrespective of the boards of education are significantly better than boys with respect to all the variables, self-concept, study habit and academic achievement.

8. CONCLUSION

Individuals have within themselves relatively boundless potential for developing a positive and realistic self-concept. This potential can be realized by people, places, policies, programs, and processes that are intentionally designed to invite the realization of this potential. One of the factors contributing to achievement among pupils of comparable endowments is the variation of the pupil’s ability to organize their work and to study efficiently. An important area of guidance therefore, is specific training in how to study, how to learn and how to work efficiently. The amount and kind of study in which a learner engages differs with his age and grade level. The learner’s technique and habits of study need to be adjusted to changing learning materials, purposes and desired outcomes.

REFERENCES


AUTHORS’ BIOGRAPHY

Dr. S. Chamundeswari is an Associate Professor of Physical Science-Education at NKT National College of Education for Women, Chennai. She has 22 years of teaching experience and 16 years of research experience with voluminous publications of books and journals to her credit. She has lent her expertise with institutions both in India and abroad.

Mrs. V. Sridevi is an Assistant Professor of Biological Science-Education at NKT National College of Education for Women, Chennai. A budding researcher, with a sincere urge to carry on cross-cultural research studies.

Mrs. Archana Kumari is an Assistant Professor of Education at NKT National College of Education for Women, Chennai. Having keen interest in research, she has journal publications to her credit both at the national and International levels.