CHAPTER – 5

SUMMARY AND CONCLUSIONS

In education, creativity plays a key role to solve the problems of mankind. Creativity is a unique gift of nature; a highly valued human quality which has been known for a long time to have its influence on scientific, technological and artistic spheres of human activity. The rapidly changing demands and challenges existing in the world today have almost necessarily been accompanied by creative expression and contributions from talented persons. Creativity is the key to education, and the solution of mankind’s problems. It is an important factor in leadership in any field. The present day scientific and technological progress has been made possible through creativity. Music, painting, poetry and other forms of art that give us not only pleasure and joy, but also lend a new meaning of life, are all products of creativity.

Creativity is the main source of emergence and development of human culture. Torrance (1962) defined creativity as a process of becoming sensitive to problems; difficulties; gaps in knowledge; missing elements; disharmonies and so on; identifying the difficulty; searching for solutions; making guesses or formulating hypothesis and possibly modifying and testing them and finally communicating the results.

It has been widely believed that academic interests have or should have some effect on the career decisions made by students at the senior secondary level. Academic interests are generally conceptualized as an important component of motivation. They are hypothesized to have a significant effect on a student’s decisions- for example, choice of a field – and on the outcomes of his decision- for example, quality or level of achievement, expressed satisfaction and persistence in a field. The number and complexity of options available to students in secondary schools appear to make adequate first hand experience in each option difficult to come by. Standardized interest measures, therefore, have been developed to serve as a relatively brief and efficient substitute for such “real life” exploration of options. They are expected to add relevant information to what the student already knows about his interests. This information may
take various forms. It may help the student to “discover” interests previously unrecognized—perhaps by extending his knowledge of options or of activities associated with an option. It may help him to perceive a new and more useful structure for his interests.

The student’s approach to learning is highly individualistic with a wide variation of technique observable. One student may prefer the quiet of the library, another, the student lounge; one may underline a text, another takes notes; one may study intensively for several hours, another may take many breaks. The variations are endless.

‘Study habits’ mean the ways of studying whatever systematic or unsystematic, efficient or otherwise. Study habits mean the habits that an individual might have formed with respect to his learning activities Azikiwe (1998) describes study habits as “the adopted way and manner a student plans his private reading after classroom learning so as to attain mastery of the subject”. According to her, good habits are good assets to learners because they assist students to attain mastery in their field of specialization.

For good study habits, one must have the desire to learn with full working abilities and talents. There is evidence that instructions about systematic study skills improve the academic performance. Study skills entail a beneficial study environment, self-management and time and stress management as well as more traditional skills of effective listening, reading, comprehension, note taking and sophisticated writing skills. Motivation is essential for instilling study skills. Researchers suggest that behavioral self-management, mood management and self-monitoring are successful tactics in developing motivation. Development of study skills should be addressed at every educational level.

Academically, many students perform badly due to factors other than low intellectual capacity. One such factor is poor study habits, which often result in poor academic performance even among the naturally bright students.

Study habits and academic interests play a very important role in the life of students. Success or failure of each student depends upon his own study habits and choice of academic interests. Of course, study is an art and as such it requires practice.
Some students study more but they fail to achieve more. Others study less but achieve more. Success of each student definitely depends upon ability, intelligence and efforts of students. No doubt, regular study habits bring their own rewards in the sense of achievement of success and after rightly choosing the subjects of interest.

Moreover, creativity is of recent origin even in the advanced countries. Few studies have been carried out in the areas in the Indian context. There is a dire need of sustained empirical research in this field. For example, what is the effect of urban and rural environment on creativity? Do boys and girls differ in the various components of creativity- like fluency, flexibility and originality? How creativity effects study habits of an individual etc?

The above discussion inspired the investigator to explore the academic interests and study habits of secondary school students in relation to their creativity.

STATEMENT OF THE PROBLEM

STUDY OF ACADEMIC INTERESTS AND STUDY HABITS IN RELATION TO CREATIVITY AMONG SECONDARY SCHOOL STUDENTS

DEFINITION OF TERMS

Academic Interests: It means the interest of the students in different streams/courses in the field of education. In the present study, academic interests and educational interests are taken as synonyms.

Study Habits: It means the pattern of behaviour adopted by students in the pursuit of their studies. It refers to the ways of studying, whatever systematic or unsystematic, efficient or otherwise. “Study Habits include students’ habits of concentration, note-taking, time-budgeting and study method.” (Smith, 1961)

Creativity: It is the ability or power to create, to bring into existence, to invest with a new form, to produce through imaginative skills, to make or bring into existence something new. According to Barron (1969), “Creativity means to create something new by assimilating existing principles or things.”
OBJECTIVES OF THE STUDY

1. To study academic interests, study habits and creativity among secondary school students.
   1.1 To study academic interests, study habits and creativity among secondary school urban students.
   1.2 To study academic interests, study habits and creativity among secondary school rural students.
   1.3 To study academic interests, study habits and creativity among secondary school students (boys).
   1.4 To study academic interests, study habits and creativity among secondary school students (girls).

2. To study academic interests in relation to creativity among secondary school students.
   2.1 To study academic interests in relation to creativity among secondary school urban students.
   2.2 To study academic interests in relation to creativity among secondary school rural students.
   2.3 To study academic interests in relation to creativity among secondary school students (boys).
   2.4 To study academic interests in relation to creativity among secondary school students (girls).

3. To study the study habits in relation to creativity among secondary school students.
   3.1 To study the study habits in relation to creativity among secondary school urban students.
   3.2 To study the study habits in relation to creativity among secondary school rural students.
3.3 To study the study habits in relation to creativity among secondary school students (boys).

3.4 To study the study habits in relation to creativity among secondary school students (girls).

4. To study academic interests in relation to study habits among secondary school students.

4.1 To study academic interests in relation to study habits among secondary school urban students.

4.2 To study academic interests in relation to study habits among secondary school rural students.

4.3 To study academic interests in relation to study habits among secondary school students (boys).

4.4 To study academic interests in relation to study habits among secondary school students (girls).

HYPOTHESES

1. There exists no correlation between academic interest and creativity among secondary school students.

1.1 There exists no correlation between academic interests and creativity among secondary school urban students.

1.2 There exists no correlation between academic interests and creativity among secondary school rural students.

1.3 There exists no correlation between academic interests and creativity among secondary school students (boys).

1.4 There exists no correlation between academic interests and creativity among secondary school students (girls).
There exists positive correlation between study habits and creativity among secondary school students.

2.1 There exists positive correlation between study habits and creativity among secondary school urban students.

2.2 There exists positive correlation between study habits and creativity among secondary school rural students.

2.3 There exists positive correlation between study habits and creativity among secondary school students (boys).

2.4 There exists positive correlation between study habits and creativity among secondary school students (girls).

There exists no correlation between academic interests and study habits among secondary school students

3.1 There exists no correlation between academic interests and study habits among secondary school urban students.

3.2 There exists no correlation between academic interests and study habits among secondary school rural students.

3.3 There exists no correlation between academic interests and study habits among secondary school students (boys).

3.4 There exists no correlation between academic interests and study habits among secondary school students (girls).

SCOPE OF THE STUDY

The main intention of the study is to make a survey of the Academic Interests and Study Habits in relation to Creativity among secondary school students (XI and XII class pupils) of CBSE schools, in rural and urban areas of Amritsar and Tarn Taran Districts of Punjab State.
DESIGN OF THE STUDY

The present study was designed to find the relationship among Creativity, Academic Interests and Study Habits of secondary schools students. It was a correlational study. In order to study this relationship, the descriptive survey method of investigation coupled with techniques of descriptive, correlation and factor analysis was used.

DATABASE AND METHODOLOGY

SAMPLE

In the present study, a sample of 500 students (both boys and girls) studying in XI and XII classes of different C.B.S.E. (Central Board of Secondary Education) schools in rural and urban areas of Amritsar and Tarn Taran districts were taken.

Sample was selected by using Stratified Random Sampling Technique. The breakup of the sample is shown below:
TOOLS USED

1. A New Test of Creativity (Verbal) by Dr. Roma Pal (1986) was used.
2. Educational Interest Record by Dr. SP Kulshreshtha (1985).
3. PSSHII (Palsane and Sharma Study Habit Inventory) by MN Palsane and Sadhna Sharma (1989).

STATISTICAL TECHNIQUES

1. Descriptive Analysis
   It comprised of measures of central tendency such as mean, standard deviation, skewness and kurtosis. These were worked out to study the nature and distribution of scores on various variables.

2. Correlation Analysis
   It comprised of product moment coefficients of correlation. These were worked out to obtain the relationship between the criterion variable of creativity and independent variables of Academic Interests and Study Habits.

3. Factor Analysis
   Factor analysis is a statistical technique based on the hypothesis that a set of related variables can be adequately described by a set of factor less in number than the set of original variables. Rotated component matrix was employed to study the factor structure of variables and to see how the variables contribute the variable. This method avoids a number of problems inherent in the conventional studies.

The above mentioned various types of statistical methods were employed to analyze the data and results were interpreted accordingly.
MAIN FINDINGS

FINDINGS BASED ON DESCRIPTIVE ANALYSIS

It was observed for rural students that their academic interest in agriculture is more than that of urban students. Urban students are much more interested in technology as compared to rural students. Academic Interest in commerce and fine arts for both rural and urban was found to be nearly the same whereas in science, humanities and home science, the rural students were more interested than urban students.

Study Habits of rural students were found to be better than that of urban students. It may be due to more leisure time activities available to urban students. Urban students were found to be more creative than rural students as the mean scores of all the components of creativity in case of urban students were more than that of rural students.

It was also found that in the field of agriculture, boys had more interest than that of girls, whereas girls showed greater interest in commerce, fine arts, home science and humanities groups. However, no difference was observed between boys and girls with respect to interest in science subjects. In case of technology, boys showed greater interest than that of girls. The study also showed that the study habits of girls were better than that of boys and that the girls were more creative than boys as the value of all the three components of Creativity (fluency, flexibility and originality) in case of girls was higher than that of boys.

FINDINGS BASED ON CORRELATION ANALYSIS

Academic Interests and Creativity

The relationship between Academic Interest and Creativity was examined. It was observed that the students opting for fine arts were more creative as compared to those opting for agriculture and commerce.

It was also noted that correlation coefficient between agriculture and fluency component of total creativity was negative and significant which showed that agriculture and fluency are negatively associated with each other. Further, it was also
seen that fine arts and flexibility were positively and significantly associated with each other.

However, correlation coefficients between total creativity and other components of academic interests like home science, humanities, science and technology were insignificant which showed that there was no association between these components and creativity in total sample.

The correlation analysis of academic interest and creativity of urban sample showed that the urban students opting for fine arts and home science were more creative as compared to other urban students opting for other subjects. However, correlation coefficients of total creativity with other components of academic interests like agriculture, commerce, humanities, science and technology were insignificant which showed that there was no association between these components and creativity in total sample.

In case of rural sample, it was observed that the rural students opting for agriculture and commerce were less creative as compared to other rural students opting for other subjects. No association between agriculture, fluency and flexibility components of total creativity was observed as the correlation coefficients were insignificant. Also, commerce and originality component of total creativity were negatively and significantly associated with each other. However, no association between commerce and flexibility component of total creativity was observed as the correlation coefficient was insignificant.

Further, correlation coefficients between total creativity and other components of Academic Interests like fine arts, home science, humanities and science were insignificant which showed that there was no association between these components and total creativity in rural sample.

In case of girls and boys sample, it was seen that the girls opting for commerce were comparatively less creative as compared to those opting for other streams. On the other hand, the boys opting for science and technology were more creative as compared to those opting for other subjects.
Study Habits and Creativity

To examine the relationship between Study Habits and Creativity, correlations between Study Habits and Creativity for total sample, girls, boys, urban and rural samples were worked out. It was seen that for urban sample and total sample, study habits were significantly and positively correlated with total Creativity. It indicates that the students with better study habits were found to be more creative. But for total sample, no association between the study habits and fluency component of total creativity was found as the correlation coefficient was insignificant.

Further, for urban sample, study habits were positively and significantly correlated with fluency and flexibility components of total creativity. But no association between the Study Habits of urban sample and originality component of total creativity was found as the correlation coefficient was insignificant. However, correlation coefficients between total creativity and Study Habits of girls, boys and rural samples were insignificant which showed that there was no association between these variables.

Academic Interests and Study Habits

It was seen that for total sample, the components of Academic Interests such as fine arts, humanities, science and technology were positively and significantly correlated with Study Habits. No correlation was found between Study Habits and components of Academic Interests namely agriculture, commerce and home science.

For urban sample, the components of Academic Interests such as fine arts, humanities, science and technology were found to be positively and significantly correlated with study habits whereas no correlation was found between study habits and agriculture, commerce and home science. In case of rural sample, it was observed that coefficient of correlation between science and study habits were positive and significant. But no correlation was found between study habits and academic interests in agriculture, commerce, fine arts, humanities, home science and technology.

For boys sample, it was seen that the components of Academic Interests namely humanities, science and technology were positively and significantly correlated with Study Habits. For girls sample, no correlation between Study Habits and the
components of Academic Interests i.e. agriculture, commerce, fine arts, home science, humanities, science and technology was found.

**FINDINGS BASED ON FACTOR ANALYSIS**

**Total Sample**

The technique of Factor Analysis was employed to study the factor structure of variable and to see how the variables contribute to the variable. In case of total sample, three factors were identified; Factor I was identified as Factor of general Academic Interest, Factor II was identified as Factor of Creativity and Factor III as Factor of Scientific Academic Interest. It was seen that Factor I (General Academic Interest) turned out to be most important factor as the variance explained by this factor is 25.059. Thus, Academic Interest, Creativity and Scientific Academic Interest were three main components in the results of Factor Analysis of total sample. These factors have no loadings of Study Habits.

**Urban Sample**

In case of urban sample, Factor I was identified as Factor of General Academic Interests and Creativity. This factor turned to be the most important factor because variance explained by this factor is 24.724. Further, Factor II was identified as Factor of Creativity, Factor III as Factor of Non-Scientific Academic Interest, Factor IV as Mixed Factor.

In case of urban students, it was found that the study habits and agriculture were negatively associated with each other, thereby proving that the urban students who opted agriculture had unsatisfactory study habits. Also, the urban students who opted for commerce and agriculture were less creative.

**Rural Sample**

In case of rural sample, Factor I and II were identified as Factors of General Academic Interests, Factor III as Factor of Creativity and Factor IV as Factor of Study Habits. In this case, the variance explained by Factor I was 26.772.
It was concluded that rural students who were interested in agriculture, were also interested in science and technology. This may be due to the modern technologies being used in agriculture these days. Further, the results also showed that the rural students who opted for agriculture had unsatisfactory study habits. Also, it was found that rural students were less interested in fine arts and home science.

**Boys Sample**

In case of boys sample, Factor I was identified as Factor of General Academic Interests, Factor II as Scientific Creativity and Factor III as Non-Scientific Academic Interests. In this case, Factor I again turned out to be the most important factor as the variance explained is 27.403.

It was concluded that the boys who opted for science subjects were more creative. The boys who opted for commerce, fine arts and home science had unsatisfactory study habits whereas those who opted for science had good study habits.

**Girls Sample**

In case of girls sample, Factor I was identified as Factor of Academic Interest, Factor II as Factor of Creativity and Academic Interests, Factor III as Scientific Academic Interests and Factor IV as Study Habits. Thus, in case of girls sample, the Factor I (Academic Interests) turned out to be most important factor as variance explained by this factor is 24.608.

From factor analysis on girls sample, it was concluded that the girls who opted for fine arts and home science were more creative. It may be because of the nature of these subjects. Girls who opted for science and technology had good study habits which may be due to the practicability of these subjects. On the other hand, the girls who opted for commerce, fine arts and home science had unsatisfactory study habits.

**CONCLUSIONS**

On the basis of findings of the present study, following conclusions were drawn:

1. Rural students showed more interest for agriculture, science, humanities and home science but urban students were more interested in technology and home science
whereas both rural and urban students’ interest in commerce and fine arts was nearly same.

2. Boys had more interest in agriculture and technology whereas girls were interested in commerce, fine arts, home science and humanities. But both (boys and girls) showed equal interest for science subjects.

3. Study Habits of rural students were found to be better than that of urban students.

4. Girls had better study habits than that of boys.

5. Urban students were found to be more creative than their rural counterparts.

6. Girls were found to be more creative in comparison to boys.

7. Positive correlation between Study Habits and Creativity in case of total sample and urban sample was observed whereas for boys, girls and rural sample no correlation was found between Study Habits and Creativity.

8. For total sample, students opting for fine arts were more creative as compared to those opting for agriculture and commerce. For urban sample, students opting for fine arts and home science were more creative. For rural sample, students opting for agriculture and commerce were found to be less creative.

9. Girls opting for commerce were less creative than those opting for other streams whereas boys opting for science and technology were found to be more creative.

10. For urban sample, the components of academic interests namely fine arts, humanities, science and technology were positively and significantly correlated with Study Habits whereas for rural sample, Study Habits had a positive and significant correlation with science. But for other fields, no such correlation was found.

11. For boys sample, the components of Academic Interests such as humanities, science and technology were positively and significantly correlated with Study Habits. But for girls sample, no correlation between the variable of academic interests and study habits was found.
EDUCATIONAL IMPLICATIONS

On the basis of the results and conclusions, the following implications can be drawn:

1. The Study Habits are important for pupils in their school education and life long education. Hence, it is essential to inculcate the good Study Habits among the school pupils.

2. The Study Habits of girls are better than that of boys. Care must be taken to improve the study habits of boys.

3. Creativity and intelligence are associated with good Study Habits. Therefore good Study Habits should be inculcated among the pupils.

4. Academic achievement of the pupils is associated with their Study Habits and choice of their subjects. Hence, pupils should be guided for good Study Habits and the choice of their academic subjects.

5. Students should be appreciated in their class for using good techniques of study so that they may be an example for other students.

SUGGESTIONS FOR FURTHER RESEARCH

Some of the suggestions for undertaking further research are as follows:

1. A replica of study may be conducted at other regions for wider generalizations of results.

2. Studies similar to the present one may be taken by involving more variables such as values, intelligence, aptitudes etc.

3. Comparative studies may also be conducted across government/private/public schools.

4. Studies may be taken to identify the academic interest areas with large number of samples.
5. In the present research work, total score of study habits was taken. The future researchers can take different areas of study habits e.g. budgeting time, physical conditions for study, reading ability, note taking, preparation for examination etc. and investigate.

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