CHAPTER VI

SUMMARY, FINDINGS AND EDUCATIONAL IMPLICATIONS

In the preceding chapters, introduction to the variables of the study, review of related literature, emergence of the problem, the objectives, hypotheses and delimitations of the study were presented. Also, the design of the study, the tools used for data collection, procedure of the study, analysis of data and results were discussed. The present chapter has been devoted to a brief summary, findings and implications of a study.

6.1 INTRODUCTION

Psychology can be defined as the scientific study of mental process, experiences and behaviour. Psychology as a discipline focuses on the study of mental process, experiences and behaviour of individuals and thus contributes towards individual and social well being. Since, the problems faced by the world today have significant behavioral components, their solutions will necessary involve the science and practice of psychology. Study of psychology purports to nurture sensitivity and skills that would help students in their daily life as well as in the world of work and facilitate their quest for personal growth and effectiveness. It can help people learn how to conserve the natural resources, reduce prejudice and discrimination, promote healthier life styles, build stronger family relationships, and deal effectively with challenges faced in everyday life.

6.2 NEED OF THE STUDY

The classrooms of the twenty first century aim at providing instruction according to the needs of the individual. Students
expect individualized attention from the teachers. Well structured instructional materials developed by teachers could be an answer, providing learning guidance to students, and providing feedback to students regarding their learning progress.

No single technique for individualizing instruction is appropriate in all situations. Which technique will succeed best depends on the combination of variables affecting learning in that setting. Each student deserves a fair chance to achieve the learning objectives, regardless of the ways the student differs from other learners. For this, alternative instructional routes may be provided to the students. Students may be exposed to self-instruction lessons they can complete at their own pace. In short, methods of meeting individual differences among students have called for increased flexibility and variety in instructional materials.

Individualized instruction developed in response to the recognition that any teaching method which treated all members of a group in a similar fashion could not address the differing needs of individual students. Individualized instruction is directed towards individual student rather than groups of students.

So the investigator proposed to develop and validate a self instructional package (SIP) in psychology for class XI students and determine its effectiveness with respect to certain cognitive and affective outcomes in relation to students of different stress levels.

### 6.3 Statement of the Problem

EFFECTIVENESS OF SELF-INSTRUCTIONAL PACKAGE FOR CLASS XI PSYCHOLOGY STUDENTS IN RELATION TO COGNITIVE AND AFFECTIVE OUTCOMES.

### 6.4 Objectives of the Study

- To develop and validate a self-instructional package (SIP) for class XI psychology students.
To compare the effectiveness of self instructional package (SIP) and traditional instruction in respect of cognitive outcomes (achievement in psychology) at knowledge and comprehension categories of objectives.

To study the effectiveness of self-instructional package (SIP) and traditional instruction in respect of students of high average and low academic stress levels.

To study the effectiveness of self instructional package (SIP) and traditional instruction in respect of cognitive outcomes (achievement in psychology) of students of high, average and low academic stress levels at different categories of objective.

To study the effectiveness of self-instructional package (SIP) and traditional instruction in respect of affective outcomes (achievement motivation and attitude towards psychology).

To study the effectiveness of self-instructional package and traditional instruction in respect of affective outcomes of students of high, average and low academic stress levels.

6.5 HYPOTHESES

Hypotheses for analysis of mean gain scores on achievement in psychology

H₁ The two instructional treatments yield comparable mean gains on achievement scores in psychology.

H₂ There is no significant difference in mean gain on achievement scores of high, average and low academic stress group of students.

H₃ Comparable mean gains on achievement scores are yielded at knowledge and comprehension categories of objectives.

H₄ There is no significant interaction between instructional treatments and three levels of academic stress.
There is no significant interaction between instructional treatments and categories of objectives.

There is no significant interaction between three academic stress levels and categories of objectives.

The two instructional treatments attain comparable mean gain on achievement scores with three stress levels at knowledge and comprehension categories of objectives.

**Hypotheses for analysis of mean difference scores on achievement motivation**

The two instructional treatments yield comparable mean difference scores on achievement motivation.

The three academic stress groups of students yield comparable mean difference scores on achievement motivation.

There is no significant interaction between instructional treatments and levels of stress.

**Hypotheses for analysis of mean difference scores on attitude towards psychology**

The two instructional treatments yield comparable mean difference scores on attitude towards psychology and its different domains, viz.,

- Psychology as a curricular area.
- Curriculum transaction.
- Psychology teacher.
- Teacher taught relations.
- Psychology as a future vocation.
H₁₂ There is no significant difference in mean difference scores of attitude towards psychology of high, average and low academic stress students and its different domains, viz.,

H₁₂.1 Psychology as a curricular area.
H₁₂.2 Curriculum transaction.
H₁₂.3 Psychology teacher.
H₁₂.4 Teacher taught relations.
H₁₂.5 Psychology as a future vocation.

H₁₃ There is no significant interaction between instructional treatments and levels of academic stress for attitude towards psychology and its different domains, viz.,

H₁₃.1 Psychology as a curricular area.
H₁₃.2 Curriculum transaction.
H₁₃.3 Psychology teacher.
H₁₃.4 Teacher taught relations.
H₁₃.5 Psychology as a future vocation.

6.6 DELIMITATIONS

• The study was limited to class XI psychology students studying in schools of Chandigarh.

• The self-instructional package (SIP) was developed on topics of psychology from the prescribed syllabus of class XI by NCERT (2003).

• The experiment was limited to about 114 working days of the academic session.

• Only six chapters were selected for instructional treatment.
6.7 DESIGN OF THE STUDY

The present study employed pre-test, post test, control group with one experimental group design.

The first 2x3x2 factorial design with repeated measures ANOVA was employed for analysis of mean gain scores on achievement. The variable of instructional treatment was studied at two levels namely experimental group (T₁) which was exposed to self-instructional package (SIP) of psychology and control group (T₂) which was taught by conventional instruction. Academic stress was a classification variable. It was studied at three levels viz., high, average and low academic stress. The variable of categories of objectives was studied at knowledge (O₁) category and comprehension (O₂) category.

The second 2x3 factorial design was analysed with the help of ANOVA for difference scores on achievement motivation. The variable of instructional treatment was studied at two levels viz., experimental group (T₁) and control group (T₂). The variable of academic stress was studied at three levels viz., high, average and low academic stress.

The third 2x3 factorial design was analyzed with the help of ANOVA for difference scores on scale of attitude towards psychology. Here the variable of instructional treatment was studied at two levels viz., experimental group (T₁) which was exposed to by self-instructional package (SIP) and (T₂) which was taught by conventional instruction. The variable of academic stress was studied at three levels viz., high, average and low academic stress.

6.8 SAMPLE

In the present study, purposive sampling technique was employed. Firstly, the schools were selected based on the
Principals’ permission and co-operation in which psychology was taught at class XI. So, the following schools whose principals agreed to help in the investigation were:-

- St. Soldiers International Public School, Sector-28, Chandigarh.
- Government Model Senior Secondary School, Sector-16, Chandigarh.

As per the requirement of the present investigation, the scale of academic stress was administered on 4th and 5th July, 2005 to classify students into three groups viz., high, average and low academic stress. There were 104 students classified into three academic stress levels of experimental group and 104 students classified into three academic stress levels of control group.

6.9 TOOLS USED

For the present investigation following tools were employed:

- Self-Instructional Package in psychology (developed by the investigator).
- Criterion test/Achievement test in psychology (developed by the investigator).
- Scale of attitude towards psychology (developed by the investigator)
• Scale of academic stress from Bisht Battey of stress scales (Bisht, 1987).
• Deo Mohan’s Achievement Motivation Scale (1985).
• Group test of intelligence by G.C. Ahuja (1976).

6.10 PROCEDURE

Procedure of the experiment comprised of two main stages as follows:

(i) Selecting the sample
(ii) Conducting the experiment.

STAGE 1: Selecting the Sample

The present study was conducted on 208 class XI students of psychology from the Govt. Girls Senior Secondary School, Sector-18-C Chandigarh, Govt. Model Senior Secondary School, Sector 35-B, Chandigarh, St. Soldiers International Public School, Sector-28-A, Chandigarh.


STAGE – 2 : Conducting the experiment

The experiment was conducted in three phases as below after an orientation to the students regarding the instructional treatment:

Phase 1 : Administration of Pre-test
Phase 2 : Conducting the Instructional Programme
Phase 3 : Administration of Post-test
Phase 1: Administration of Pre-test

This phase involved the administration of the following tests to the students of the experimental group and control group i.e.

1. Criterion/ Achievement Test in Psychology
2. Achievement Motivation Scale.
3. Scale of Attitude towards Psychology.

Separate response sheets were provided. The answer sheets were scored with the help of scoring key. The scores indicated the previous knowledge possessed by the students, their attitude towards psychology and their achievement motivation.

Phase 2: Conducting the instructional Program

Experimental Group.

For experimental group to find out the efficacy of the treatment variables, booklets of self instructional package (SIP) in psychology of six lessons (converted into 37 sub-units) were provided to each student. Students were instructed to follow the instructions. A thorough supervision was made by the investigator herself. No time limit was imposed on the students. Unit criterion test was administered after the completion of each unit. Self-repetition and teacher-explanation were used as corrective/alternative instructions. Remediation was required for the students whenever unit test performance failed to reach the pre-defined level of excellence i.e., 90%.

Control Group

This group was taught the same content by their psychology teacher in the conventional way. It generally refers to reading out the chapter by the students or some explanation by the teacher, solving exercises and providing notes for certain important questions. Objectives and content for six lesson were provided to
the psychology teachers. No unit criterion test was conducted after the completion of each unit. The time schedule followed for this group was similar to that of the other group.

**Phase III : Administration of the Post Test**

Immediately after the instructional treatment was over, the subjects were assessed on criterion measures to determine the effect of the treatment. The following tests were administered to both the experimental and control groups:

1. Criterion/ Achievement test in psychology
2. Achievement motivation scale
3. Scale of attitude towards psychology

**DATE SCHEDULE OF THE EXPERIMENT**

**Stage 1 :** (i) 4<sup>th</sup> July, 2005 and 5<sup>th</sup> July 2005 Administration of Academic stress scale and intelligence test.

**Stage 2 : Conducting the experiment**

**Phase 1 :** 8<sup>th</sup> July 2005 11<sup>th</sup> July, 2005, Pre-test stage

Administration of Criterion test, Scale of attitude towards psychology and Achievement Motivation Scale.

**Phase 2 :** Instructional Program

**Phase 3 :** 22<sup>nd</sup> Oct. 2005-25<sup>th</sup> Oct, 2005 – Post test stage

Administration of Criterion test, Scale of Attitude towards psychology and Achievement Motivation Scale.

**6.11 STATISTICAL TECHNIQUES**

The following statistical techniques were employed to analyse the data obtained from the experiment to test the hypotheses.

- Descriptive statistical techniques like means, S.D’s, skewness and kurtosis of the attitudes difference scores, achievement gain scores and achievement motivation difference scores.
• Factorial design 2x3x2 Analysis of variance for mean gain on achievement scores.
• Factorial design 2x3 Analysis of variance for mean difference scores on scale of attitude towards psychology.
• Factorial design 2x3 analysis of variance for mean difference scores on achievement motivation.

6.12 MAJOR FINDINGS

The findings of the study, pertaining to learning outcomes in psychology among XI class psychology students have been given in the following paragraphs:

Findings pertaining to cognitive outcomes (achievement in Psychology)

➢ Students exposed to Self-Instructional Package (SIP) yielded better gain achievement in psychology as compared to those taught through conventional instruction.

➢ The three groups of academic stress students viz., high, average and low performed comparably in psychology.

➢ The students yielded better mean gains at comprehension category of objectives as compared to knowledge category of objectives.

➢ There was no significant interaction between instructional treatments and academic stress.

➢ There was no significant interaction between instructional treatments and categories of objectives.

➢ Students exhibited better mean gains at comprehension category of objectives than knowledge category of objectives when exposed to Self-Instructional Package (SIP).
- Students exhibited better mean gains at comprehension category of objective when exposed to conventional instruction than at knowledge category of objective.
- Students exposed to self-instructional package (SIP) exhibited better mean gains at knowledge category of objective as compared to students exposed to conventional instruction.
- Students exposed to self-instructional package (SIP) exhibited better mean gains at comprehension category of objective as compared to students exposed to conventional instruction.
- There was no significant interaction between three academic stress levels and categories of objectives.
- There was no significant interaction between the two treatment groups, three levels of stress and two categories of objectives.

**Findings pertaining to affective outcomes (achievement motivation)**

- Students exposed to self-instructional package (SIP) exhibited better enhancement in achievement motivation as compared to students exposed to conventional instruction.
- The three academic stress groups of students yielded comparable mean difference scores on achievement motivation.
- There was no significant interaction between instructional treatments and three levels of academic stress.

**Findings pertaining to affective outcomes (attitude towards psychology)**

- The two instructional treatments yielded different mean scores on attitude towards psychology. Students exposed to Self-Instructional Package (SIP) exhibited better enhancement
in attitude towards psychology as compared to conventional instruction.

- With respect to five domains of attitude towards psychology, the instructional treatments yielded comparable mean difference scores on the following domains:

  DOMAIN 3  (Psychology teacher)
  DOMAIN 5  (Psychology as a future vocation)

But the students exposed to self-instructional package (SIP) exhibited better mean difference scores on the following domains.

  DOMAIN 1  (Psychology as a curricular area)
  DOMAIN 2  (Curriculum transaction)
  DOMAIN 4  (Teacher taught relation)

- The students of the three academic stress levels exhibited comparable enhancement of attitude towards psychology. With respect to five domains, there was no significant difference in mean difference scores in attitude towards psychology, i.e.,

  DOMAIN 1  (Psychology as a curricular area)
  DOMAIN 2  (Curriculum transaction)
  DOMAIN 4  (Teacher taught relations)
  DOMAIN 5  (Psychology as a future vocation)

The students with average academic stress were more influenced as compared to their high and low academic stress counterparts on the following domain.

  DOMAIN 3  (Psychology teacher)

- There was no significant interaction between instructional treatments and levels of academic stress. With respect to five domains of attitudes towards psychology there was no
significant interaction between the treatment and three levels of academic stress on the following domains:

DOMAIN 1  (Psychology as a curricular area)
DOMAIN 2  (Curriculum transaction)
DOMAIN 3  (Psychology teacher)
DOMAIN 5  (Psychology as a future vocation)

But there was significant interaction between the instructional treatments and academic stress on the following domain.

But for DOMAIN 4 (Teacher taught relations)

- The students with high academic stress exposed to self-instructional package (SIP) and their counterparts exposed to conventional instruction exhibited comparable mean difference scores on attitude towards psychology.
- Students with average academic stress exposed to self-instructional package (SIP) and their counterparts exposed to conventional instruction exhibited comparable mean difference scores.
- Students with low academic stress exhibited higher mean difference scores when exposed to self-instructional package (SIP) as compared to their counterparts who were exposed to conventional instruction with respect to psychology learning, on the following domain.

DOMAIN 4  (Teacher taught relations)

- Students with high academic stress exhibited comparable mean differences. Also students with high and low academic stress exhibited comparable mean differences and students with average and low academic stress exhibited comparable differences when exposed to self-instructional package (SIP).
When exposed to conventional instruction, students with high and average academic stress exhibited comparable mean differences. Also students with high and low academic stress exhibited comparable mean differences but students with average academic stress exhibited better mean differences as compared to students with low academic stress.

6.13 EDUCATIONAL IMPLICATIONS

The present research has clearly shown that changing from a traditional competitive classroom to a modern classroom using learner centered strategies of teaching enhances achievement. In the present research, students exposed to self-instructional package (SIP) exhibited better gain in achievement in psychology as compared to students taught by conventional teaching method.

Self-instructional package (SIP) was very much liked by the students. They expressed their desire to be taught in the same way in other subjects also. It gave a better understanding of the subject (psychology). Students enjoyed learning from self-instructional method. It enhanced their thinking, gave them an opportunity to think and perform independently. Formative tests gave them a good understanding and clarity of the different concepts of psychology.

Self-instructional package (SIP) enhanced achievement motivation among learners and also their attitude towards psychology. Investigator’s support for remediation was also appreciated by the students.

Students with high, average and low academic stress exhibited comparable gain in achievement and enhancement in achievement motivation and attitude towards psychology. This is an important implication in the sense that when learners are given independence to learn, unit tests after each unit followed by remediation, their learning deficiencies reduce remarkably.
The self-instructional package (SIP) should be tailored to meet the needs of the curricula subject areas and students.

The self-instructional package (SIP) enhanced students learning, not only at knowledge level but also at comprehension level. It enhanced student’s inquisitiveness towards understanding of human behaviour.

6.14 SUGGESTIONS FOR FURTHER RESEARCH

❖ The study should be repeated to explore how self instruction affects the students of various abilities on emotional dimension.

❖ The present study was confined to teaching psychology at XI level. A similar investigation may be conducted for college or university levels in different subjects.

❖ The same study can be repeated on a large sample for validation.

❖ There is need to study the effect of self instruction with other upcoming teaching/ learning strategies.

❖ Research is needed to study the effect of self instruction on special children, either gifted or learning disabled.