

# **Chapter III**

## **Methodology**

### **3.1 Introduction**

Methodology is the processes and procedures one adopts while doing a study in order to achieve the particular objective specified. With regard to the present study the objectives have been specified in chapter I.

Methodology is concerned with how one goes about actually conducting research. What particular procedure one might employ in a given study will, however depend upon the nature and objective of the study. The methods adopted in the present study are explained in this chapter.

The study concerns the development of an instructional strategy for teaching the students of NID the course on Color and Form for Visual Communication.

The instructional strategy involves the interaction of the students with the prepared instructional strategy leading towards the attainment of certain instructional objectives. When the students with certain entry behavior go through the instructional strategy, they come out having achieved certain pre specified behaviors. The process as it involves different phases, is to be carried out at different stages, details of which are given under procedure below

### 3.2 The Design of Research

The present study was an intervention study and the approach was developmental in nature. The study aimed at studying the effectiveness of the prepared instructional strategy. Therefore a single group pretest intervention posttest, design was employed for the present study. The improvement if any, in achievement between the two tests were taken as the effectiveness of the prepared instructional strategy. The data generated for the study was entirely qualitative in nature.

obtained.

### 3.3 Sample of the study

The target population of the present study refers to all design students. As it is not feasible to bring all these students under the present study, it was decided to take one batch of post-graduate students from the National Institute of Design (NID), India's premier design Institute. The subjects for the present study comprised of all the students of first semester of post graduate program, ceramic and glass design of National Institute of Design, in the year 2004-2005. There were 12 students in the batch when the study took place out of the total 12 students 9 were girls and 3 were boys. The choice of the particular Institute for the present study was made because NID is one of the premier Institutes in Design in India. And the decision of this particular discipline was made because of the co-coordinators appreciation for the kind of study proposed and his willingness to provide all the necessary facilities, especially getting the support of the faculties dealing with the particular discipline.

The National Institute of Design (NID) is internationally acclaimed as one of the foremost multidisciplinary institutions in the field of design education, applied research, training, design consultancy services and outreach programs. It has been the recipient of significant national and international awards since it was established in 1961 as an autonomous institution under the Ministry of Industry, now known as Ministry of Commerce & Industry, Government of India. NID has been a pioneer in industrial design education after Bauhaus and Ulm in Germany and is known for its pursuit of design excellence to make Designed in India, Made for the World a reality. NID's graduates have made a mark in key sectors of commerce, industry and social development by taking role of catalysts and through thought leadership. NID has been recognized as a Science and Industrial Research Organization by the Department of Science & Technology, Government of India.



Figure-1.View of the main building of NID from the lawns

## Graduate Diploma Program in Design

Graduate Diploma Program in Design (GDPD) commences with a two-semester Foundation Program. This program is geared to assist in developing attitudes and sensorial skills, necessary for further specialization in specific areas of design. The purpose is to create an awareness of the environment and to arouse the students' creative faculties. The primary concern of the Foundation Program is to introduce the students to the Fundamentals of design, to inculcate them to design as a problem solving process and to develop a highly evolved aesthetic sensitivity, and 'design' attitude.

In the foundation program, basic design courses are augmented by related studies of science and liberal arts, to help and develop an understanding of the Indian milieu and the relevance of design.

The foundation program is geared to inculcate the development of values, attitudes and sensorial skills; necessary for any design specialization. It aspires to create an awareness of the changing environment by constantly relating the students; learning to real life situations. The program provides the necessary direction, stimuli, facilities and experience to foster creativity and thereby help each individual discover their own identity, ability and potential.

The foundation program is the basis on which the remaining design curriculum is built. It also makes students appreciate the multidisciplinary nature of design.

This 4-year intensive professional UG program is offered in the following three Faculty streams (areas of design specialization are given in brackets):

Industrial Design (Product Design, Furniture and Interior Design, Ceramic & Glass Design) Communication Design (Graphic Design, Animation Film Design, Film & Video Communication, Exhibition Design) Textile and Apparel Design (Textile Design)

Admission is open to students who have passed or who will appear for qualifying examinations under the Higher Secondary (10+2), or equivalents

#### **Post-Graduate Program in Design**

This 2 to 2 two and a half year program is offered in the following specific areas of specialization in 14 design disciplines under the five faculties.

Eligibility criteria for PGDPD: Candidates having a Bachelor's degree or equivalent are eligible to apply. Upper age limit for candidates is 25 years

Industrial Design (Product Design, Furniture & Interior Design, Ceramic & Glass Design, Toy Design & Development)

Textile and Apparel Design

(Textile Design, Apparel Design & Merchandising Lifestyle Accessory Design)

Communication Design

(Graphic Design, Animation Film Design, Film & Video Communication)

IT Integrated Design

(New Media Design, Software & User Interface Design, Information & Digital Design)

Interdisciplinary Design Studies

(Strategic Design Management)

### **3.4 Tools used for the study**

The present study required detailed information about the difficulties faced by students in using color and form in a design problem for maximum communication and their level of knowledge in the subject before the intervention.

The tools used for the purpose of collection of the required data are as follows:

1. Questionnaire for students which was developed by the investigator in order to understand the difficulties the students had in the learning process. And understand their present level of knowledge in the subject. It consisted of items to check their understanding of color and form.

2. A pre intervention test and post intervention test in the form of a one day equivalent assignments both before and after carrying out intervention following the prepared instructional strategy.

Pre intervention test consisted of two parts. Part one was an assignment and part two was a write up. The assignment was to create a composition

on a given subject in the paper given. The theme for the composition in the assignment was given by the investigator. The students were free to choose one subject from three choices. And the second part was to make a write up justifying the use of color in their composition. The post intervention test was also an equivalent assignment. It had two parts similar to the case of pre intervention test. The first part was to create composition on a given theme. The themes of the composition were given by the investigator. The students were free to choose from three choices .After the assignment the students were asked to give a write-up justifying the use of color in the composition. The second part of the post intervention test was the write-up. The time duration for both the assignments were one day each that is eight working hours.

### 3. Pre intervention Focused Group Discussion

A discussion with the students was carried out after the pre intervention test and questionnaire session to understand their level of competence before the intervention. The discussion contained topics which concerned with subject color and form and the teaching methodologies in their previous course.

### 4. Feed back on a continuous basis.

Students' feedback of their experiences was taken by discussion and it was conducted on a continuous basis throughout the intervention. The feed back sessions were kept informal so that the students could feel free

to express their views. The investigator kept a record of the students' feedback.

#### 5. Observation of student works by the investigator.

The investigator observed the work of each student on a day today basis. A feedback on the work was given for further improvement.

All the works done during the intervention were submitted by the end of the course. And the works were observed by the investigator to find out the improvement happened on each assignment.

#### 6. Post intervention Focused group discussions.

Focused group discussions were conducted at the end o the intervention to collect data. The investigator noted down the data emerged to analyze their learning.

### **3.5 Procedure of the study**

The study was conducted in four phases. They are:

1. Assessment of students prior to intervention.
2. Development of the instructional strategy.
3. Implementation.
4. Evaluation.

Right from the beginning the investigator was part of the class as the instructor. The course was part of the academic requirement for students. Thus it was scheduled as per the time table. In the introductory session

the investigator and the co faculty introduced the study aspect of the course to the students. This helped in conducting more informal discussions regarding their learning.

The investigator used to be with the class throughout the day. The class was scheduled from 9.00 am in the morning till 6.00 pm in the evening. But most of the students work even after this time. The studios (work places) were open till 12.00 pm in the night. NID is a residential institute and the students stay back in the studios till the studios are closed. Almost every day the investigator used to visit the class even after working hours to see their work. This time was also used to have informal discussions with the students. (Ref ch: 4.10)

### **3.5.1 Assessment of students prior to intervention**

In the first phase the investigator studied the problems faced by the students in the application of color and form in a design problem. It was also intended to understand the previous knowledge and competence level of the student. The objective were achieved through

1. Implementation of a questionnaire to the students. The questionnaire was open ended. It contained questions related to the color course they have undergone in the previous degree. And the teaching learning methodologies used in that course. An inquiry in to the contents of the course was also included. The questionnaire was implemented before starting the course.

2. A pre intervention test comprising of a one day assignment. The pre intervention test was to understand the skill level, knowledge of color theories and amount of consciousness in application of color in a design problem.
3. Focused Group Discussions of the pre intervention test work and questionnaire with the students. The discussions were kept informal in order to get clear first hand information. Color theories and the reasons for color decisions were discussed during these sessions.

### **3.5.2 Development of the instructional strategy**

In the second phase the investigator prepared an instructional strategy on color and form considering the problems and difficulties faced by the students. The preparation of the instructional strategy involved the following techniques to be taught to the students during the implementation depend on the course content that was dealt with a detailed analysis of the course contents were undertaken prior to the development of the instructional strategy. The instructional strategy contained the following section:

1. Discussions
2. Assignments
3. Projects
4. Lecture (Theory inputs)
5. Supervised work
6. Documentation

After preparing the materials the suitability and adequacy was ascertained by checking up with senior faculties from design teaching and the necessary modification was made after discussing it with experts from the field of design and design education. The experts were consisted of design teachers and practicing designers.

### **3.5.3 Implementation**

During the implementation of the strategy, the students were provided with a series of learning experiences as discussed in Phase II. The course abstract which contains the course contents and evaluation criteria was given to the students before the implementation of the strategy. The learning experience was divided into different sessions. The duration of the sessions varied according to the requirement of the topic. The theory inputs were delivered as lecture and slide shows. After supervised work practical demonstrations were conducted whenever required. Assignments and projects were given to ascertain and strengthen the learning happened through theory lectures. Discussions were conducted in the class in groups as well as one to one discussion. All the works done in the class were documented. Each assignment was discussed in the class student wise and feedback was given for further refinement. The student refined each work till the expected result was achieved. The materials developed are presented in the fourth chapter.

### **3.5.4 Post intervention Assessment of students**

After successful completion of the learning experience, a post intervention test in the form of one day equivalent assignment was

administered. The assignment was similar in nature to the pretest. After the completion of the assignment the students was asked to give a write up justifying the use of color in the composition.

In this phase the investigator has studied the effectiveness of strategy by evaluating how consciously students were using color and form for effective communication in a design problem. Post intervention test was assigned in the form of a one day crash assignment which was equivalent to the pre intervention test. The student's feedback on their experience of learning in the course was taken. Focused group discussions were carried out. One to one discussions with the students were conducted after each session. Besides these the investigator observed how students carried out their course in terms of their interest and involvement in the work on a continuous basis. He has kept a record of his observations on each of the students which were also assessed against criteria which were developed in the course of the study. Each student was asked to give a self analysis on their growth during the implementation of the strategy. ✓

### **3.6 Data Analysis**

With the help of questionnaire, pre intervention test and focused group discussion, the data for the first objective were collected and analyzed qualitatively. After the analysis an instructional strategy for teaching the course on Color and Form was developed by the investigator. After the implementation of the course the effectiveness of the course was checked through analyzing the data obtained from the post intervention test and

the focused group discussion. All the data collected were qualitative and they were analyzed qualitatively by assigning different categories. The qualitative data were summarized under appropriate headings. A complete detail of analysis of data and results are presented in chapter V.