Chapter IV
Design and Methodology

The present investigation was designed to study the effect of feedback on self-confidence of both men and women, and various hypotheses manifesting the relationship between self-confidence and feedback have been formulated in the last chapter. This chapter deals with the design and methodology used to test all the hypotheses. The investigator conducted three separate experiments to investigate the level of self-confidence in no feedback, positive feedback and negative feedback condition.

Experiment I:

The first experiment was a two group before-after design employed to study the sex-differences in self-confidence under no feedback condition. A schematic of the design is as follows:

<table>
<thead>
<tr>
<th>Group</th>
<th>Before Measures</th>
<th>Treatment</th>
<th>After measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I (Men)</td>
<td>Level of self-confidence</td>
<td>Performance on a task; but no feedback</td>
<td>Level of self-confidence</td>
</tr>
<tr>
<td>n = 12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group II (Women)</td>
<td>Level of self confidence</td>
<td>Performance on a task without any feedback</td>
<td>Level of self-confidence.</td>
</tr>
<tr>
<td>n = 12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The same procedure was repeated for 3 different
tasks.

Experiment II:

The second experiment was run to study the effect of positive feedback on the self-confidence of Ss. It was a single group before-after design, including 24 Ss in total. Half of them were males and half were females. The exact design was as follows:

<table>
<thead>
<tr>
<th>n = 24</th>
<th>Before measures</th>
<th>Treatment</th>
<th>Post measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of self-confidence</td>
<td>Positive feedback after each task</td>
<td>Level of self-confidence</td>
<td></td>
</tr>
</tbody>
</table>

Three tasks were presented one by one and self-confidence was measured in the same way.

Experiment-III:

The third experiment was also conducted in a similar manner to study the effect of negative feedback on self-confidence of Ss. Self-confidence was measured before and after negative feedback which the subjects received on the accomplishment of every task. The following is the schematic of design:

<table>
<thead>
<tr>
<th>n = 24</th>
<th>Before measures</th>
<th>Treatment</th>
<th>Post measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement of level of self-confidence</td>
<td>Negative feedback after each task</td>
<td>Level of self-confidence</td>
<td></td>
</tr>
</tbody>
</table>

The same was repeated for three tasks.
Sample:

A sample of total 72 (36 males and 36 females) belonging to an age group of 21±3 years was randomly selected from a group of students studying in various post-graduate courses in M.D. University, Rohtak. Each experiment was conducted on 24 subjects (12 males and 12 females). In experiment 1 the male and female subjects were grouped separately. Experiment II and III were single group design and a mixed sex group was used in these experiments.

However, the distribution of sample for actual experiment was different. Every time when experiment was performed, a mixed gender group of six was brought in the laboratory. Thus total twelve groups were randomly assigned to their treatments i.e. positive, negative and no feedback.

Material Used:
(i) Tasks:

There were total 3 tasks. The present experiment was related to study the effect of feedback and a randomly preplanned treatment was to be given to the Ss. Therefore, the major consideration in selecting a task was that it be sufficiently novel and ambiguous to create questions in subjects' minds about how well they were performing (McCarty, 1986). For such a task,
Questions used for rating of self-confidence:

(i) "How confident are you that you can perform as well as the other students on the following task". (asked before starting every task).

(ii) "If you were to perform the same task in future how confident are you that you could perform as well as other students". (asked after performing every task).
external reports from an informed source, which subjects would then need to assess their success or failure adequately, would allow the experimenter to manipulate feedback. Guilford (1959) developed a task that is adaptable to this criterion. The similar kind of tasks were used in the present experiment. These tasks require subjects to consider unique uses for ordinary objects. Total 3 such objects were selected here i.e. a pencil, a wire hanger, and a cardboard box—which were presented in random order.

(ii) Measures of self-confidence:

Self-confidence was measured by the responses on two different questions. One question was presented immediately after giving the instructions and showing the task object i.e. before the subjects started performing the task. The other question was asked immediately after the subject had performed the task. Each question was accompanied by a scale ranging from 0 to 100 with an intermediate difference of ten. The subject had to tick the level of his/her confidence on this scale. These two questions were as follows:

(i) "How confidence are you that you can perform as well as the other students on the following task", asked before starting every task.

(ii) "If you were to perform the same task in future, how confident are you that you could perform as well as other students", asked after the accomplishment of each task.
Computer Cards:

Four unused computer cards were shown to each group of Ss during instructions. After the accomplishment of each task, the assistant was sent for evaluation to a confederate, who was provided with a list specifying the planned random assignment for either positive or negative feedback to various subjects. The assistant returned with pre-punched computer cards and the answer-sheets. The punched cards were presented to the subjects at the time of distributing remarks on performance. This was done in order to assure them that the investigator was using a technical device, for the evaluation of their answers.

Method

The present investigation was conducted to study the effect of feedback on self-confidence of both men and women. Keeping in view the nature of the work and time available for work, thirty six boys and thirty six girl students studying in various postgraduate courses were randomly selected to participate in this study.

A mixed gender group of six subjects was brought in the psychology laboratory of M.D.University. Before performing the experiment, the subjects were introduced
with a following set of instructions.

"You are participating in a creativity project. This project work constitutes three tasks. Five minutes will be given to you to work on each of the three tasks. You are to develop the unusual uses for common objects. One object will be presented at one time. Your answer on the task would be compared to those students who have already participated in this experiment. The answers of those students have been fed in a computer. The same computer will analyze your performance to compare them with performance of other students and yield the remarks accordingly. The quality of your answers will carry more weight than the quantity itself."

Although no computer or like device was used, these instructions were given to reduce the suspicion that might arise when the subjects produced a long list that did not match the feedback they received. For example, a subject who wrote a long list of uses might be given a negative feedback because of poor quality of responses. Similarly if a subject randomly designated to receive positive feedback produced an exceptionally short list of uses for a given object, a high score could be justified if the individual could assume the ideas were more creative than those generated by others and then received high points.
One of the three objects i.e. a pencil, a wire hanger or a cardboard box was shown to the group of subjects and instructions were given. Now before starting the performance on the task they were asked to mark on self-confidence scale in response to the question, "How confident are you that you can perform as well as the other students on the following task". Then these subjects developed unusual uses for a given object. Their answer papers were taken after five minutes, and sent through an assistant to a confederate, where the responses were evaluated on the basis of already planned random assignment for positive and negative feedback.

Some remarks indicating positive or negative feedback were given to the subjects. Then the subjects were made to respond to the second question, "If you are to perform this same task in future, how confident are you that you could perform as well as other students?"

Same process was repeated for rest of the two tasks. The order of the presentation of the task was different for each group and this order was determined randomly. The procedure of data collection in no feedback condition was same except that in the feedback condition, subjects anticipated receiving coded results at the end of each work period, but in the
no feedback condition, the whole group was told that their performance results would be available on the following day. At no time students were allowed to talk with each other about the experiment on their results. The subjects showing over confidence, that is marking at 100 in the very beginning of a task on self-confidence scale were discarded. The obtained results were tabulated for the analysis.