CHAPTER 6

QUALITATIVE ANALYSIS

This chapter deals with the qualitative analysis to study the effectiveness of training module. The qualitative analysis was carried out to study the process that goes in the minds of children during training by the module, their willingness towards module and the case studies. For the same three methods were adopted.

1) Willingness Scale

2) Reaction Scale

3) Interviews and case study

6.1.0 Willingness Scale: A willingness scale was prepared to study the willingness of the student-teachers towards the module. The scale was mainly in form of statements. It was presented only after the completion of training module As the question no. 1-11 in the willingness scale were in form of rating scale, they were analyzed by calculating the mean scores of the student-teachers of different intelligence group and total mean scores as shown in Table 6.1

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Score</th>
<th>HI</th>
<th>MI</th>
<th>LI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Mean Willingness scores</td>
<td>44.94</td>
<td>44.53</td>
<td>43.82</td>
<td>44.43</td>
</tr>
<tr>
<td>2.</td>
<td>Mean score on each question</td>
<td>4.085</td>
<td>4.048</td>
<td>3.98</td>
<td>4.039</td>
</tr>
</tbody>
</table>

It is very much clear from the table that the student-teachers of all the three intelligence groups, irrespective of their intelligence level had high willingness to adopt the method and strategies.

Analysis of answers of Q. No. 12, 13, 14: Question no. 12, 13 and 14 were open ended questions relating to the quality improvement and assessment. Following were the results
Question 12 enquired about the essential requirement for implementation. More than 90% student-teachers agreed that the module was self-sufficient. 10% student-teachers suggested some orientation from the teacher may be required.

Question 13 enquired about the hindrances in the implementation of module. 90% student-teachers found the module free of hindrances. 7% students suspected that the callous attitude of institutions towards adopting something new may be a hindrance. 2% student-teachers believed that the module was time consuming. 1% student-teachers believed, without follow-on, the method may remain unused.

Question 14 demanded suggestions for implementation. 50% student-teachers suggested general awareness campaign for the strategy. 40% student-teachers believed that preparation of computer-assisted program on the same may help. 75% student thought that the training must be made compulsory for the teachers. Once the teachers are trained, they will develop a positive attitude towards it, which will ultimately help.

**Conclusion:**

Student-teachers of all the three intelligence groups, irrespective of their intelligence level had high willingness to adopt the method and strategies. More than 90% student-teachers agreed that the module was self-sufficient. 10% student-teachers suggested some orientation from the teacher may be required. 90% student-teachers found the module free of hindrances. 7% students suspected that the callous attitude of institutions towards adopting something new may be a hindrance. 2% student-teachers believed that the module was time consuming. 1% student-teachers believed, without follow-on, the method may remain unused. 50% student-teachers suggested general awareness campaign for the strategy. 40% student-teachers believed that preparation of computer-assisted program on the same may help. 75% student thought that the training must be made compulsory for the teachers. Once the teachers are trained, they will develop a positive attitude towards it, which will ultimately help.

The willingness of student teachers of experimental group to implement the module in PO method in real classroom situation was very high. When asked for the suggestions, student-teachers suggested that the module can be used in the classroom and no special instrumental material is required to implement the module. The student-teachers further felt that the module could improve the quality of the teacher education and could bring improvement in teacher education program without adding to any extra burden on the staff as well as students. The
method also was not time consuming. The student teachers were also willing to implement the method as they found it highly effective in developing lateral thinking in the students.

**6.2.0 Reaction Scale:**

To study the willingness of the student-teachers towards the module a willingness scale was developed by the investigator. The student-teachers were required to fill the scale after the completion of module. As the questions in the reaction scale were in form of rating scale, the scores were analyzed in two ways. The mean scores of the student-teachers of different intelligence group and total mean scores were calculated as shown in Table 6.2

It was very much clear that the student-teachers of all the three intelligence groups, irrespective of their intelligence level had highly positive reactions towards the method, strategies and overall towards the module.
Table 6.2

Table showing mean scores on reaction scale for the student-teachers of different intelligence group and total mean scores

<table>
<thead>
<tr>
<th></th>
<th>HI</th>
<th>MI</th>
<th>LI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mean of Reaction scale scores</td>
<td>79.12</td>
<td>78.47</td>
<td>76.41</td>
<td>78</td>
</tr>
<tr>
<td>2. Mean score on each question</td>
<td>4.16</td>
<td>4.13</td>
<td>4.02</td>
<td>4.10</td>
</tr>
</tbody>
</table>

Conclusion:

Student-teachers of all the three intelligence groups, irrespective of their intelligence level had highly positive reactions towards the method, strategies and overall towards the module. They found the module interesting, simple and highly appreciated that. They agreed with the theory part and could well understand it.

6.3.0 Interview and Case-studies

To have some direct, face-to-face interaction with the student teachers, interviews were conducted. Two student-teachers achieving highest in lateral thinking test and two student-teachers achieving lowest in lateral thinking test were selected. Similarly two student-teachers gaining highest in lateral thinking test after the treatment were selected. A case study was prepared by collecting information from class-teachers, friends, classmates etc. The scores of lateral thinking test along with the dimension wise scores of the student-teachers selected for the case-study are given in table 6.3
Table 6.3

Table showing scores of lateral thinking test along with the dimension wise scores of the student-teachers selected for the case-study

<table>
<thead>
<tr>
<th>Test scores</th>
<th>Occasion</th>
<th>Name of student-teacher</th>
<th>Anu</th>
<th>Sheetal</th>
<th>Rashmi</th>
<th>Kiran</th>
<th>Poonam</th>
<th>Renu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical thinking</td>
<td>Pre-Test</td>
<td>10</td>
<td>8</td>
<td>24</td>
<td>16</td>
<td>20</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post-Test</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>12</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Escape</td>
<td>Pre-Test</td>
<td>16</td>
<td>14</td>
<td>0</td>
<td>16</td>
<td>8</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post-Test</td>
<td>10</td>
<td>8</td>
<td>14</td>
<td>4</td>
<td>20</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Originality</td>
<td>Pre-Test</td>
<td>15</td>
<td>24</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post-Test</td>
<td>9</td>
<td>24</td>
<td>27</td>
<td>27</td>
<td>6</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Outrageous-ness</td>
<td>Pre-Test</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post-Test</td>
<td>64</td>
<td>48</td>
<td>20</td>
<td>36</td>
<td>0</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Lateral thinking</td>
<td>Pre-Test</td>
<td>45</td>
<td>50</td>
<td>24</td>
<td>32</td>
<td>28</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post-Test</td>
<td>83</td>
<td>80</td>
<td>64</td>
<td>71</td>
<td>38</td>
<td>54</td>
<td></td>
</tr>
</tbody>
</table>

Case-studies: To analyze the responses of the interviewees, complete case studies were prepared. For the same, data was collected from the teachers, friends along with the responses from interviews and the direct observations.

Case Study- 1:

Anu: Anu was a B.Ed student in G.V.M.C.O.E, Sonepat. She was 21 years old and a graduate from sciences. She had two younger brothers and her father was a businessman. Her mother was a house-lady. Abu belonged to a middle socio-economic status family with good financial conditions. She was highly energetic and motivated during the module presentation as well as during interview. Her I.Q. score was on a higher side (I.Q.=112). Her lateral thinking pre-test score was average i.e. 45. But her post-test score was highest i.e. 83, much higher than average. She had highly positive reactions towards the module. She had very high willingness towards getting this module implemented in the schools and colleges. She even found the method (PO) very interesting and thought herself lucky to get the opportunity to get this life changing experience. She believed that lateral thinking must be introduced to the students at school level also. She even wanted to learn more about this method and wanted to consult more literature on it. She found the module self-sufficient and highly fruitful. She thought that the module could
be used in presence as well as in absence of teacher. She found the strategies PO-1, PO-2, PO-3 very innovative. She showed keen interest in solving lateral thinking problems given in worksheet as well as in lateral thinking test. She suggested that the module should be compulsory for the student-teachers.

Before the treatment, Anu was a little bit unsystematic and confused. In spite of her higher I.Q. she was not socially very stable. She befriended people very fast. But her most of friendships survived only for few days. She had intolerance for the criticism. She was uncertain about making choices which made her confused. She was inquisitive yet was afraid of accepting something new. She confessed that the exposure with the module was a life-changing experience for her. She became more systematic and was ready to discuss more. Her friends and teachers felt that now she was more open to the criticism. Her social traits were improving and she was seen being more socially open, friendly and active. She also became more welcoming to new ideas and accepted that her vision has expanded and now she would like to try some new career choices and would like to herself make her decisions for herself.

**INTERVIEWEE 2:**

**SHEETAL:** Sheetal was a B.Ed student in G.V.M.C.O.E, Sonepat. She was 23 years old and a graduate. She was a very silent but sincere student. Her teacher had high views about her and thought she was very hard working. But her I.Q. score was average (I.Q.=95). Her father was a junior engineer. She was the youngest of three daughters. She wanted to pursue post- graduation in mathematics after completion of B.Ed. Her pre- test score was 50 and post-test score was 80. She had highly positive reactions towards the module. She had very high willingness towards getting this module implemented in the schools and colleges. She also found the module highly effective and self-sufficient. She believed that the module would be highly appreciated in the institutions and would be hindered by none. She felt that the module should be included in the syllabus. She wanted to study more about thinking, especially lateral thinking. She was interested in learning the strategies PO-1, PO-2, PO-3. She even enquired about some other related methods. She even enquired about the literature related to this method; especially de Bono’s books. She even appreciated the modular approach. She rather wanted that other subjects also should be taught by modular manner.

Before the treatment, she was very shy and reserve in nature. She was also very conservative in her outlook. She befriended only very few people and opened up very slowly. Although she was hard-working, she was quite apprehensive of experimenting. The module brought great behavioural changes in her that were clearly noticed by all. She became friendlier and started
taking initiatives. She accepted that module has changed her outlook. After the experiment she became more innovative. During discussions she was full of ideas that were novel and she could convincingly convey them which she felt she never could do earlier. During the interview she even accepted that even at home her parents were surprised as she became more open to experimenting new things. She accepted that now she has started experimenting with her clothes, colour choices and even food.

**INTERVIEWEE 3:**

**Rashmi:** Rashmi was a B.Ed student in G.V.M.C.O.E, Sonepat. She was 25 years old and a post-graduate. She was a post-graduate in commerce. Her father was a government employee and her mother was a primary teacher who passed away at an early age. She had a younger brother. She was an above average girl in studies and wanted to be a C.A. She was an obedient girl but was quite reserved. She had an average intelligence (I.Q.=105). She gained only 24 marks in pre-test that can be considered to be very low. But her score increased immensely after the treatment. Her post-test score was 64, making her the highest gainer (40 marks). Initially she had inhibitions and took time to open up even during the interview. She remained very serious during the treatment and her interest increased with time. She was very positive towards the module and found it very effective. She accepted that the terms lateral thinking and PO were totally new for her. She found strategies PO-1, PO-2, PO-3 to be very interesting. She showed a high willingness towards implementing the method and module in the class. The only suggestion she gave was that it should be a part of the course and not an extra burden on the student-teachers. She suggested that the module could be supported by power point slides. She feared that most of the teachers must be unaware of the method and so can’t help in imparting the same to the students. She asserted that first of all the teachers should be trained by the module.

Before the treatment, Rashmi was quite reserved. Although she was respectful towards her teachers yet she was not very friendly with her class-mates. She was suspicious in nature and never trusted anyone. She accepted during the interview that module has brought a flip to her thinking. She felt that the loss of mother at an early age made her feel lonely. She always felt there was nobody for her help and so got confined to herself. The module gave her a chance to look at the things in a new perspective. She became friendlier. She became more trusting and cooperative. She liked to discuss about her views on module and the method with a lot of people, which further helped her open up. She started accepting other people’s views and was open to discuss her own opinions as well as her problems.
INTERVIEWEE 4:

Kiran: Kiran was a B.Ed student in G.V.M.C.O.E, Sonepat. She was 22 years old and a graduate in arts. She was a talkative girl. She was the only child of a working couple. She belonged to a middle socio economic status family with all the facilities available at home. Some of her friends and teachers found her quite inquisitive as she enquired about everything. She sometimes caused the disturbance in the class due to her nature. She was the second highest gainer (39 marks) in the lateral thinking test. Her pre-test score was 32 and post-test score was 71. She was keen to learn about the module and remained active during the treatment. She liked the method a lot and even wanted to have a copy for herself to discuss with her parents. She knew a little bit about lateral thinking problems through internet, yet she accepted that she could never understand the method earlier i.e. before reading the module. She had highly positive reactions towards the module and a very high willingness towards implementing it in her future classes. She found strategies PO-1, PO-2, PO-3 to be very interesting and wanted to apply them in real life situations too. She felt that callous attitude of teachers towards learning something new could be the only hindrance for the module implementation. She believed a little orientation from the experts in subject will help changing the attitude and generating more awareness about the method.

Before the treatment, Kiran was very adamant and rigid. She was also quite outspoken and always tried to assert herself, totally ignoring the other’s views. It used to cause a lot of rifts and arguments with her friends. At times she got quite aggressive. But the treatment brought a lot of changes in her. She started sharing her views in a better way. She even was willing to listen to others and was found to be more tolerant. She even accepted in the interview that she even used the techniques of module for the resolving her conflicts. She was even found to be more full of ideas and was seen to be more involved in healthy discussions.

INTERVIEWEE 5:

POONAM: Poonam was a B.Ed student in G.V.M.C.O.E, Sonepat. She was 24 years old and a graduate from arts. She was a newly married girl who got married just before B.Ed session started. She was mostly inattentive in class and looked pale and tired. She was from low I.Q. group (I.Q.=85) and got 28 marks in pre-test. She got only 38 marks even after the treatment. Even during interview, she remained reserved initially. After a lot of apprehensions, she accepted that she was very disturbed and wanted to learn nothing new. She believed that her life will never be changed and was more concerned with her immediate problems. It appeared that she was in desperate need of counseling from some marriage counselor. She asserted that she
was doing B.Ed only as her in-laws wanted her to do so. As for now she only wanted to get rid of her B.Ed. program so as to start her life. She was unwilling to make a career and was afraid of taking decisions. Her confidence level was very low. Yet she accepted that whatever little she gained from the module made her think many a times. She was also willing to keep a copy of module with her so that once the rough phase of her life passes, she may learn again about the method. She even tried to resolve some conflict at home using the PO method. But she accepted that her low morale and low self-confidence was making her unable to continue.

INTERVIEWEE 6:

RENU: B.Ed student in G.V.M.C.O.E, Sonepat was 22 years old and a graduate. She was an intelligent girl who was bright in studies. She belonged to medium I.Q. level. She got only 29 marks in pre-test, which increased to 54 after treatment. She was the only child of her parents and was very adamant in views of her teachers and friends. She believed that the educational system in its present state was. She accepted that she was not much in favour of such a method which may create confusion. She accepted that initially she was not able to understand the method clearly and found it a bit confusing. Thinking for her was inborn. She believed that the logical thinking was a better way of thinking. As it was easy and can be presented with ready-made solutions. She feared that lateral thinking could bring chaos. But gradually, she accepted that she got to know a lot of new things from the module, and became supportive of the method PO and strategies. She found modular approach to be quite interesting and found its language easy and understandable. But her small confusion was about the method. Still she wanted that children must be taught such a method, but in modulation.

In spite of her slow progress in the module, she was found to be aware of the theory of the method. She was also found to be more supportive and cooperative after the treatment. She even accepted that exposure to the module in PO method was good to provoke idea generation in the students. Her friends and teachers noted that changes in her behavior were seen after the treatment. Her conservative and adamant nature was changing for good. Now she felt awkward whenever she got aggressive and accepted her mistake more openly.
Conclusion:

From the information collected from these interviews, it was clear that the student-teachers were quite interested in the method. Following factors were notable.

Irrespective of the results on I.Q. test and lateral thinking test, student-teachers liked and appreciated the method as well as the module equally. The student-teachers of all the three intelligence groups, irrespective of their intelligence level had high willingness to adopt the method and strategies and had highly favourable reactions towards the method and strategies. They supported that the module should be implemented in the schools and no special instrumental material is required to implement the module.

The student-teachers further felt that the module could improve the quality of the teacher education and could bring improvement in teacher education program without adding to any extra burden on the staff as well as students. The method also was not time consuming. The student teachers were also willing to implement the method as they found it highly effective in developing lateral thinking in the students.

Student-teachers felt that the module can be used in the classroom Whereas most of the student-teachers gained much from the module, the student-teachers who gained least were because of inattentiveness, due to major personal problem (interviewee 5) or due to rigidness in thinking and inability to accept something new (interviewee 6).

Along with the change in scores on lateral thinking test the module was found effective in bringing behavioural changes in the student-teachers. Whereas no separate test was administered to study the behavioural changes, these changes were clearly evident while preparing case study. Especially the student-teachers, who scored well in the post-test, were highly influenced by the module. They became friendlier, cooperative, sharing and got full of ideas and positivity.