Impact of teaching through simulated condition to modify behaviour among science stream pupil teachers

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Abstract
The purpose of the study is to find out the effectiveness of teaching through simulated teaching to modify behaviour among pupil teachers belonging to science discipline. A sample of 100 pupil teachers studying in the different B.Ed colleges affiliated to Kurukshetra University as selected by using random sampling method. As a tool Flander Interaction analysis Category (FIAC) were used. The lack of confidence in class of pupil teachers is removed of simulation teaching and students get full confidence of teaching in classroom situations. The defects in present teaching process as well as content were removed under simulated conditions. The skill of lecturing in an appropriate manner was increased. The skill of writing on blackboard was neat as far as possible individually and appropriate use of space on blackboard was increased undoubtedly under simulated conditions. The effect of questioning skill of B.Ed pupil teacher was notable. The skill of narration and illustrations was increased in B.Ed pupil teachers under simulated conditions.

Keywords: simulated condition, behaviour modification, pupil-teachers

Introduction
Teachers are the backbone of the country. Their contribution to the nation is just remarkable if they are using the appropriate method of teaching to modify the behaviour of the students. Teachers must be acquainted and informed about day to day development so that they must be able to use their advanced knowledge and skills in the class. Though the quality education highly depends upon the teachers, we have to prepare good teacher for our schools. Hence, we need a number of good teacher training colleges to produce quality teachers for schools. The important aspects of the education and training of teachers is the development of their teaching skills to make effective teachers.

In India, an old and traditional teaching practice programme has become a permanent feature and in present time that has totally failed and become ineffective. The student-teachers who come to training department to become an efficient teacher, as far as may be possible, but it is an open secret that instead of becoming a good teacher, he/she becomes maladjusted in the actual school situation.

Objectives of Study
1. To find out the effect of simulated conditions on modification of teaching behaviour.
2. To find the effect of simulated conditions on teaching behavior of science pupil teachers.

Hypotheses of Study
1. Simulated conditions will be more effective on modification of teaching behaviour than present system of B.Ed. pupil teachers.
2. The modification of behaviour of science teachers under simulated teaching process is superior than the process of present system.

Methods
In the present study the investigator used Flanders ten categories system of interaction analysis as a tool. In present Study the investigator used Percentage, Mean, S.D., F-test & t-test to analysis and interpretation of data.
As per need and nature of the study the investigator used experimental method. In the present study the investigator consider population all the B.Ed. pupil teacher of Kurukshetra University. The present sample of study was random cumpurposive sample. 100 Science pupil teachers were taken from Government aided colleges affiliated to Kurukshetra University, Haryana. Then 50 pupil teachers of science discipline made as control group & 50 pupil teachers of science: discipline as experimental group to compare the result.

**Procedure of the Study**

In this study whole sample was divided into two equal parts one as experimental group and another control group. Each group was of 50 pupil teacher. The experimental as well as control group further divided into small groups each of (8 to 10) pupil teachers. Thus, pre and post stage data of teaching skill of each group were collected with the help of Flanders Ten Category System. The Hypothesis was verified on the basis of statistical calculations according to data collection by experiment.

**Analysis & Interpretation of Data**

One of the rigorous analysis was used for the interpretation of teacher-pupil interaction in terms of behaviour ratios. These behaviour ratios has been obtained from data of science group pupil teachers, which were organized into tabular forms. In the present investigation, sixteen important behaviour ratios were calculated; data for each behaviour ratio were organized to calculate mean, standard deviation, standard error and fiduciary limit, also with regard to pre and post observations of experimental and control groups.

**Pre – Stage:** The data related to behaviour of the science discipline pupil teachers shows that ‘mean, standard deviation, standard error and fiduciary limits of experimental and control groups are equal in pre-stage at 0.05 and 0.01 (both) levels. The lowest and the highest mean, standard deviation, standard error and fiduciary limits at 0.05 and 0.01 levels were 22.00 and 60.50, 12.33 and 31.84, 2.83 and 7.32 and 28.23 to 30.27 and 75.87 to 81.58 respectively.

**Post – Stage:** The collected data of science discipline pupil teachers with behaviour ratios are shows that mean, standard deviation, standard error and fiduciary limits at 0.05 and 0.01 levels of experimental and control groups are different in post-stage. The lowest mean, standard deviation, standard error and fiduciary limits of experimental and control groups were 13.08 and 17.92, 3.31 and 11.24, 0.76 and 2.58 and 14.68 to 15.27 and 23.34 to 25.35 at 0.05 and 0.01 levels respectively. On the other hand the highest mean, standard deviation, standard error and fiduciary limits of experimental and control groups at both (0.05 and 0.01) levels were 65.31 and 65.22.

**Table 1:** Showing analysis of variance of experimental and control group of science discipline teachers at pre and post-stages related to behaviour ratio

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Mean Square</th>
<th>SED</th>
<th>F</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>TT</td>
<td>24880.27</td>
<td>2660.92</td>
<td>2.89</td>
<td>9.22</td>
</tr>
<tr>
<td>ITT</td>
<td>10149.42</td>
<td>2228.03</td>
<td>1.41</td>
<td>4.55</td>
</tr>
<tr>
<td>DTT</td>
<td>7035.95</td>
<td>1212.11</td>
<td>1.79</td>
<td>5.80</td>
</tr>
<tr>
<td>PT</td>
<td>8811.25</td>
<td>1173.96</td>
<td>2.32</td>
<td>7.50</td>
</tr>
<tr>
<td>SC (1/D)</td>
<td>5193.09 11595.18</td>
<td>1166.08 2260.65</td>
<td>1.37 1.58</td>
<td>4.45 5.12</td>
</tr>
<tr>
<td>(lid)</td>
<td>11507.84</td>
<td>2256.56</td>
<td>1.57</td>
<td>5.09</td>
</tr>
<tr>
<td>PIR</td>
<td>11677.40</td>
<td>2243.00</td>
<td>1.61</td>
<td>5.20</td>
</tr>
<tr>
<td>TRR</td>
<td>13885.78</td>
<td>1946.56</td>
<td>2.21</td>
<td>7.13</td>
</tr>
<tr>
<td>TQR</td>
<td>34022.25</td>
<td>4945.37</td>
<td>2.12</td>
<td>6.67</td>
</tr>
<tr>
<td>CCR</td>
<td>14690.94</td>
<td>1925.08</td>
<td>2.36</td>
<td>7.63</td>
</tr>
<tr>
<td>SSR</td>
<td>12763.41</td>
<td>3271.41</td>
<td>1.20</td>
<td>3.90</td>
</tr>
<tr>
<td>PSSR</td>
<td>10677.87</td>
<td>1928.99</td>
<td>1.71</td>
<td>5.53</td>
</tr>
<tr>
<td>TTR89</td>
<td>38418.88</td>
<td>4877.44</td>
<td>2.43</td>
<td>7.87</td>
</tr>
<tr>
<td>TQR89</td>
<td>30926.18</td>
<td>3680.10</td>
<td>2.60</td>
<td>8.40</td>
</tr>
<tr>
<td>VC</td>
<td>1959.01</td>
<td>806.13</td>
<td>0.75</td>
<td>2.13</td>
</tr>
</tbody>
</table>

20.79 and 35.84, 4.8 and 8.28 and 75.35 to 79.08 and 22.52 to 88.95 respectively.

**Analysis of Data**

Table 1 indicated the F-ratio of teacher talk (TT) among groups was found 9.22 and found significant at 0.05 and 0.01 levels of confidence. So, the hypothesis was accepted and it was inferred that there is significant difference between various pairs of aforesaid groups. Significance of difference between two means of aforesaid groups was necessary to reach certain conclusion. Therefore the investigator calculated critical ratios. All the critical ratio of pre-states and post stages of experimental and control groups were found significant at both levels. So, the hypothesis was accepted.

Table 1 brought the F – ratio of Direct Teacher Talk (DTT) among groups of experimental and control groups in pre-and post-stages was found 5.80. It was found significant at both levels of confidence so the hypothesis was accepted.

Significance of difference between means of aforesaid groups it was necessary to reach the certain conclusion. Critical ratios between pre-and post-stages of experimental and control group were found significant at both levels and the hypothesis was accepted.

Table 1 showed the F-ratio to experimental and control group was found 7.50. It was found significant at 0.05 and 0.01 levels of confidence and the hypothesis was accepted. So, for significance of difference between two means of aforesaid groups it was necessary to reach the appropriate conclusion about the hypothesis and the investigator calculated the critical ratios of various groups. The entire critical ratio between experimental pre-and post-stages of control group found significant at both levels. Thus, the hypothesis was accepted.

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Table 1 displayed that the F-ratio of silence and confusion (SC) among groups related to experimental and control groups was found 4.45 and significant at both levels of confidence. So, the hypothesis was accepted and is fans inferred that there is significant difference between various pairs of aforesaid groups. No, for significance of difference between two means of aforesaid groups was nom men to reach at certain conclusion. So, the investigator verified the hypothesis by the test of critical ratio, i.e. t-test. The Mimi ratio between pre-and post-stages of emporium: mat art.: control groups, were found significant at beret levels. Then, on the basis of critical ratios, the hypothesis was accepted. Table 1 showed indirect to direct ratio (i/d) of f – ratio among groups related to experimental and control groups found 5.09 and significant at both level of confidence. Thus, the hypothesis was accepted and it was inferred between various pairs of aforesaid groups. But for significance of difference between two means of aforesaid groups it was necessary to reach at certain conclusion. So the investigator calculated critical ratio. Critical ratios of pre and post stages of experimental and control group were found significant at both levels. Thus, on the basis of critical ratios the hypothesis as accepted.

Table 1 exposed that F-ratio of Pupil initiation Ratio (P/R) among experimental and control groups was found 5.20. It was found significant at both levels of confidence. So, the hypothesis was accepted and it was inferred that there is significant difference between various pairs of aforesaid groups: Significance of difference between two means of aforesaid groups was must to reach at definite conclusion and critical ratio were calculated to test the hypothesis. These critical ratios related to pre-and post-stages of experimental and control groups, were found significant at both levels. Therefore, the hypothesis was accepted.

Table 1 brought that the F-ratio of Teacher Response Ratio (TRR) was found 7.13 among groups related to pre-and post-stages. It was significant at both levels of confidence. Thus the hypothesis was accepted and it was inferred that there is significant difference between various pairs of aforesaid groups. But for significance of difference between two means of aforesaid group was must to reach at certain conclusion and so, the investigator calculated the critical ratios which were shown in.

Table 1 displayed that the F-ratio of Teacher Question Ratio (TQR) among groups was found 6.67 which was significant at both levels of confidence. Therefore, the hypothesis is accepted and it was inferred that there is significant difference between various pairs of aforesaid groups. Significance of difference between means of aforesaid group was must to reach the appropriate conclusion. So, the investigator calculated critical ratios. Critical ratios of pre- and post-stages of experimental and control groups, was found significant at both levels. Thus, on the basis of critical ratios, the hypothesis was accepted.

Table 1 indicated that the F-ratio of Content Cross Ratio (CCR) among groups. It was found significant at both levels of confidence and hypothesis was accepted. Therefore significance of difference between means of aforesaid groups was critical ratios between pre-and post-stages of experimental and control groups were found significant at both levels. Thus, the hypothesis was accepted and it was concluded that the effectiveness of simulated technique in teaching practice was better and superior than present one, in all situations.

Table 1 showed the F-ratio of Steady State Ratio (SSR) was found 3.90 and it was significant at both levels of confidence with accepted hypothesis. But for significance difference between various pairs of aforesaid groups was necessary to reach certain conclusion. Therefore, the investigator calculated critical ratios. Critical ratios between experimental and control pre-and post-stages were found significant at both levels. So, the hypothesis was accepted. Table 1 unfolded the F-ratio Instantaneous Teaches Question Ratio (TQR89) among groups was found 8.40 significant at 0.05 and 0.01 levels of confidence. Therefore the positive hypothesis was accepted but for significance of difference between two means of aforesaid groups was must to reach the definite conclusion and critical ratios was calculated for hypothesis. Data disclosed that the critical ratios of pre-and post-stages of experimental and control groups were found significant at both levels. Thus, the hypothesis was accepted and it was found that the teaching practice under simulated conditions was more effective for modification of teacher behaviour than present practice process.

Table 1 displayed that the F-ratio of Various Circle (VC) was found 2.43. It was significant at both levels of confidence with accepted positive hypothesis. Thus, significance of difference between two means of groups was most to reach the definite conclusion. So the investigator calculated critical ratio. Critical ratio of pre-and post-stages of experimental and control groups were found significant at both levels. So the hypothesis was accepted. Hence n was concluded that simulation conditions for modification of behaviour of teachers were far better than the traditions; teaching practice programme.

Findings
1. The lack of confidence in class is removed b) simulation teaching and students get full confident: li a( teaching in class room situations.
2. The defects in prom teaching, process as well as content was removed undo simulated conditions.
3. The skill of lecturing is la appropriate manner was increased.
4. The skill of writing on blackboard was neat, As far as possible individually and appropriate use of space on blackboard was increased undoubtedly under simulated conditions.
5. The effect at questioning skill of B. Ed. pupil teacher was notable.
6. The skill of narration and illustrations was increased in & pupil teachers under simulated conditions.

Conclusions
The simulated conditions were more effective present practice programme to modify the behaviour of B. Ed. Pupil teachers. The Science pupils modify their teaching behaviour due to simulated more than present practice programme.

References