PRESENTATION AND ANALYSIS OF DATA
In the present chapter findings of the research have been systematically presented and discussed in terms of the objectives of the study and the research hypothesis set forth. In the first section the results in respect of classroom interaction styles of B.Ed student teachers have been indicated on the basis of the master matrix for the total group of student teachers as a whole followed by the master matrix of male student teachers and female student teachers carved out separately. As mentioned in the previous chapter twelve variables were formulated and defined for the purpose of the analysis These are: Teacher talk (TT), pupil talk (PT), Silence (S), teacher response ratio (TRR), Teacher question Ratio (TQR), Pupil Initiation Ratio (PIR), Teacher immediate response ratio (TIRR), Instantaneous teacher question ratio (ITQR), Content Cross Ratio (CCR), Steady State ratio (SSR), Pupil Steady State Ratio (PSSR) and Indirectness(id).

4.1 Presentation of data (Interaction Variables)

In this section the results regarding teacher talk are being presented and discussed in the first instance and the remaining eleven variables subsequently at some length:

Teacher talk (TT) For Total group

As observed in chapter III this was obtained as the ratio of the frequencies in columns 1,2,3,4,5,6,7 to total no. of frequencies in the master matrix and multiplied by 100. Thus, teacher talk for the total group
as evident from the master matrix for the total group (master matrix
displayed in appendix I) is as follows

\[
\text{Teacher talk} = \frac{\text{column1} + 2 + 3 + 4 + 5 + 6 + 7}{\text{Total frequencies}} \times 100
\]

After substitution of the relevant values in the above formula it works out as follows:

\[
\text{Teacher talk (TT)} = \frac{7 + 168 + 44 + 1127 + 14560 + 362 + 103}{18000} \times 100
\]

\[
= 90.95\%
\]

It may, therefore, be stated that in the behavioural repertoire of the B.Ed. student teachers as manifest through their classroom interaction TT was 90.95%.

A further analysis for the male and female teachers has also been conducted on the basis of their respective master matrix. The findings so obtained are as follows

**Teacher talk for male teacher** :

This was obtained as the ratio of the frequencies as explained earlier from the master matrix of Male Teachers.

After substitution of the relevant values in the given formula it works out as follows:

\[
\text{Teacher talk (TT)} = \frac{7 + 78 + 26 + 710 + 7158 + 163 + 58}{9000} \times 100
\]

\[
= 91.1\%
\]
It may, therefore, be stated that in the behavioural repertoire of the male student teachers as manifest through their classroom interaction TT was 91.1%.

**Teacher Talk (TT) for Female Teacher:**

This was obtained using the same procedure.

After substitution of the relevant values in the above formula it works out as follows:

\[
\text{Teacher talk (TT)} = \frac{90 + 18 + 517 + 7402 + 199 + 45}{9000} \times 100
\]

\[
= 91.9\%
\]

It may, therefore, be stated that in the behavioural repertoire of the female student teachers as manifest through their classroom interaction TT was 91.9%.

**Pupil Talk For the Total group (PT):**

This was obtained as the ratio of frequencies in columns 8 & 9 divided by total frequencies in the master matrix and multiplied by 100. Thus, the pupil talk for the total group of male and female student teachers as evident from their respective master matrix works out to be as follows:

\[
\text{Pupil Talk (PT)} = \frac{\text{sum of the frequencies 8 & 9}}{\text{Total frequencies}} \times 100
\]

After substitution of the relevant values in the above formula the PT for the total group, the male group and female group of student teachers was computed as follows:

PT for the total group from the concerned Master Matrix:
\[ \frac{1210 + 112}{18000} \times 100 = 7.34\% \]

It may, therefore, be stated that the extent of PT in the classroom interaction for the total group was 7.34%.

A similar analysis for the male and female teacher has been conducted on the basis of their respective master matrices and the results are as follows:

**Pupil talk (PT) for male teacher**:

PT for male group of student teachers:

\[
\text{Pupil Talk (PT)} = \frac{\text{sum of the frequencies 8 & 9}}{\text{Total frequencies}} \times 100
\]

\[= \frac{640 + 69}{9000} \times 100
\]

\[= 7.87\% \]

It may, therefore, be stated the extent of PT for male group of student teachers as evident through their classroom interaction matrix is 7.87% which is almost identical with that of the total group.

**Pupil talk (PT) for female teacher**:

PT for female group:

\[
\text{Pupil Talk (PT)} = \frac{\text{sum of the frequencies 8 & 9}}{\text{Total frequencies}} \times 100
\]

\[= \frac{570 + 43}{9000} \times 100
\]

\[= 6.81\% \]
It is evident from the above that the PT for the female student teachers works out to be 6.81% which is slightly less than that of the total and male group of student-teachers.

**Silence:**

This was obtained as the ratio of the frequencies in column 10 divided by total frequencies in the master matrices and multiplied by 100. Thus silence for the total group as evident from the master matrices for the total group is as follows:

$$\text{Silence (Sc)} = \frac{\text{frequencies in column 10}}{\text{Total frequencies}} \times 100$$

After substitutions of the relevant values in the above formula it works out as follows for the total group:

$$\text{Silence (Sc)} = \frac{307}{18000} \times 100$$

$$= 1.70\%$$

It is apparent from the above that Sc (Silence or Confusion) in the interactions of the total group is to the extent of 1.70%

**Silence (Sc) for male teacher group:**

This was obtained as the ratio of frequencies in column 10 divided by total frequencies in the master matrixes and multiplied by 100. Thus the silence for the male teacher group as evident from the master matrix for the male teacher group is as follows:
Silence = \frac{\text{sum of the frequencies in column 10}}{\text{Total frequencies}} \times 100

= \frac{191}{9000} \times 100

= 2.12\%

It may be stated, therefore, that for the male student teachers the extent of Sc comes out to be 2.12%.

**Silence for female teacher:**

For the female group after substitution of the relevant values in the above formula Sc works out to be as follows:

Silence or Confusion (Sc) = \frac{\text{Sum of the frequencies in column 10}}{\text{Total frequencies}} \times 100

= \frac{116}{9000} \times 100

= 1.28\%

It may, therefore, be stated that the amount of Sc in the interaction matrix of female student teachers works out to be 1.28% which is nearer to that of the total group’s Sc but less than that of male teachers.

**Teacher Response Ratio (TRR):**

This was obtained as the ratio of the frequencies in columns 1, 2 and 3 divided by frequencies of columns 1, 2, 3, 6, 7 in the master matrices and multiplied by 100. Thus, teacher response ratio for the total group, the male group and the female group as evident from the relevant master matrices comes out to be as follows:
Procedural formula for

Teacher Response Ratio = \frac{\text{frequencies of columns 1,2,3}}{\text{frequencies of columns 1,2,3,6,7} \times 100}

After substitutions of the relevant values in the above formula for the three groups the results were obtained as follows:

\[
\begin{align*}
&= \frac{7 + 168 + 44}{7 + 168 + 44 + 362 + 103} \times 100 \\
&= \frac{219}{684} \\
&= 32%
\end{align*}
\]

It may, therefore, be stated that the extent of TRR in the classroom interaction for the total group is 32%.

A similar analysis for the male and female teacher has been conducted on the basis of their respective master matrices and the results are as follows:

**Teacher Response Ratio for male teacher:**

TRR for the male group of student teachers:

\[
\begin{align*}
&= \frac{7 + 78 + 26}{7 + 78 + 26 + 163 + 58} \times 100 \\
&= \frac{111}{332} \times 100 \\
&= 33.43%
\end{align*}
\]

It may, therefore, be stated that the extent of TRR for male group of student–teachers as manifest through their classroom interaction matrix is...
33.43% which is somewhat different from that of total group of student-teachers.

**Teacher Response Ratio for female teacher:**

For the female group after substitutions of the relevant values in the above formula the TRR works out as follows:

\[
\text{Teacher Response Ratio (TRR)} = \frac{\text{frequencies of columns 1,2,3}}{\text{frequencies of columns 1,2,3,6,7}} \times 100
\]

\[
= \frac{0 + 90 + 183}{90 + 18 + 199 + 45} \times 100
\]

\[
= \frac{108}{352} \times 100
\]

\[
= 30.68\%
\]

It may, thus, be stated that the amount of TRR of the interaction matrix of female student teacher works out to be 30.68% which is identical with that of the male group of students teachers but fairly less than that of total group of the students teachers.

**Teacher Question Ratio (TQR):**

This was obtained as the ratio of the frequencies in column 4 divided by sum of frequencies of columns 4 and 5 in the master matrix and multiplied by 100. Thus, teacher question ratio for the total group, the male group of student teachers and the female group of student teachers as evident from their respective master matrix works out to be as follows:

\[
\text{Teacher Question Ratio} = \frac{\text{frequencies of column 4}}{\text{frequencies of columns 4 and 5}} \times 100
\]

TQR for the total group from the concerned master matrix:
\[
\frac{1127}{1127 + 14560} \times 100
\]

\[
= \frac{1127}{15687} \times 100
\]

\[
= 7.18\%
\]

It may therefore, be stated that the extent of TQR in the classroom interaction for the total group is 7.18%.

A similar analysis for the male and female teacher has been conducted on the basis of their respective master matrices and the results are as follows:

**Teacher Question Ratio for male group of student teachers:**

TQR for male group of student teachers:

Teacher Question Ratio \[= \frac{\text{frequencies of column 4}}{\text{frequencies of columns 4 and 5}} \times 100\]

\[
= \frac{610}{610 + 7158} \times 100
\]

\[
= \frac{610}{7768} \times 100
\]

\[
= 7.85\%
\]

It may, therefore, be stated that the extent of TQR for male group of student-teachers as evident through their classroom interaction matrix is 7.85% which is almost identical with that of the total group.
Teacher Question Ratio for female group of student teachers:

TQR for female group of student teachers:

Teacher Question Ratio = \[ \frac{\text{frequencies of column 4}}{\text{frequencies of columns 4 and 5}} \times 100 \]

= \[ \frac{517}{517 + 7402} \times 100 \]

= \[ \frac{517}{7919} \times 100 \]

= 6.52%

It may, therefore, be stated that the extent of TQR of the female student teachers as manifest through their classroom interaction is 6.52% which is slightly less than that of total group and male group of student teachers.

Pupil Initiation Ratio (PIR):

This was obtained as the ratio of the frequencies in column 9 divided by sum of frequencies of columns 8 and 9 in the master matrix and multiplied by 100. Thus pupil initiation ratio for the total group the male group and female group as evident from the relevant master matrices comes out to be as follows:

Procedural formula for PIR

Pupil Initiation Ratio = \[ \frac{\text{frequencies of column 9}}{\text{frequencies of columns 8 and 9}} \times 100 \]

= \[ \frac{112}{112 + 1210} \times 100 \]

= \[ \frac{112}{1322} \times 100 \]
It may, therefore, be stated that the extent of PIR in the student teacher classroom interaction for the total group is 8.47%.

A similar analysis for the male and female group as student teachers has been conducted on the basis of their respective master matrices and the results are indicated as follows:

**Pupil Initiation Ratio for male teacher:**

After substitutions of the relevant values in the above formula the PIR for male group of student teachers works out to be as follows:

\[
Pupil\ Initiation\ Ratio = \frac{frequencies\ of\ column\ 9}{frequencies\ of\ columns\ 8\ and\ 9} \times 100
\]

\[
= \frac{69}{640 + 69} \times 100
\]

\[
= \frac{69}{709} \times 100
\]

\[
= 9.73\%
\]

It may, therefore, be stated that the extent of PIR in the classroom interaction for male group of student teachers is 9.73% which is slightly more than that of total group.

**Pupil Initiation Ratio for female teacher:**

After substitutions of the relevant values in the above formula, the value of PIR works out as follow:

\[
Pupil\ Initiation\ Ratio = \frac{frequencies\ of\ column\ 9}{frequencies\ of\ columns\ 8\ and\ 9} \times 100
\]
\[
\frac{43}{43 + 570} \times 100 \\
= \frac{43}{613} \times 100 \\
= 7.01\
\]

It may, therefore, be stated that the amount of PIR as evident from the interaction matrix of the female group of student teachers works out to be 7.01% which is slightly less than that of total group of student teachers and male group of student teachers.

**Teacher Immediate Response Ratio (TIRR):**

This was obtained as the ratio of the frequencies of rows 8 and 9 and frequencies of columns 1,2,3 divided by sum of frequencies of column 8 and 9 and sum of the frequencies of columns 1,2,3,6 and 7 in the master matrix and multiplied by 100. Thus Teacher Immediate Response ratio (TIRR) for the total group, male student teachers and female student teachers as evident from their respective master matrices works out to be as follows:-

\[
\text{Teacher Immediate Response Ratio} = \frac{\text{sum of frequencies of rows } 8 \text{ & } 9}{\text{sum of the frequencies of rows } 8 \text{ and } 9} + \frac{\text{sum of frequencies of columns } 1,2,3}{\text{sum of frequencies of columns } 1,2,3,6,7} \times 100 \\
\]

After substitutions of the relevant values in the above formula it works out as follow:

\[
= \frac{181}{312} \times 100 \\
= 58.01\%
\]
It may, therefore, be stated that in the behavioural repertoire of the B.Ed. student teachers as manifest through their classroom interaction TIRR is 58.01%.

A similar analysis for the male and female teacher groups has been conducted on the basis of their respective master matrices and the results are as follows.

**Teacher Immediate Response Ratio for male teacher:**

After substitutions of the relevant values in the above formula TIRR works out as follow:

\[
\text{TIRR for male group of student teachers.} \quad = \frac{89}{166} \times 100
\]

\[
= 53.61\%
\]

It may, therefore, be stated that the extent of TIRR in the classroom interaction for male group of student teachers is 53.61% which is less than that of the total group of student teachers.

**Teacher Immediate Response Ratio for female teacher:**

\[
\text{TIRR (for female student teachers) =} \quad \frac{92}{146} \times 100
\]

\[
= 63.01\%
\]

It may, therefore, be stated that the extent of TIRR for female group of student teachers as perceptible from their classroom interaction matrix is
63.01% which is larger than that of total group of student teachers as well as the male group of student teachers.

**Instantaneous Teacher Question Ratio (ITQR):**

This was obtained as the ratio of the frequencies in column -rows (8-4) and column –rows (9-4) divided by sum of frequencies of column -rows (8-4) (8-5) (9-4) (9-5) in the master matrix and multiplied by 100. Thus Instantaneous Teacher Question ratio for the total group as evident from the master matrices for the total group is as follows:

\[
\text{Instantaneous Teacher Question Ratio} \\
\text{ITQR} = \frac{\text{sum of frequencies of (8 – 4) and (9 – 4)cells}}{\text{sum of the frequencies (8 – 4)(9 – 4)(8 – 5)(9 – 5)cells}} \times 100
\]

After substitution of the relevant values in the above formula it works out as follows for the total group.

\[
\text{ITQR (For the total group)} = \frac{984}{984 + 26 + 48} \times 100 = 93\%
\]

It may, therefore, be stated that in the behavioural repertoire of the B.Ed. student teachers as manifest through their classroom interaction ITQR is 93%.

A similar analysis for the male and female groups of student teachers has been conducted on the basis of their respective master matrices and the results are as follows.

**Instantaneous Teacher Question Ratio (ITQR) for male teacher:**

ITQR for male group of student teachers :-
ITQR (For male student teachers) = \( \frac{527}{578} \times 100 \)

\[ = 91.17\% \]

It is evident from the above that ITQR for male student teachers works out to be 91.17% which is less than that of total group of student teachers.

**Instantaneous Teacher Question Ratio (ITQR) for female teacher:**

After substitutions of the relevant values in the above formula ITQR works out as follows:

ITQR for female groups of student teachers:

\[
\text{ITQR (For female student teachers)} = \frac{457}{480} \times 100
\]

\[ = 95.2\% \]

It may, therefore, be stated that extent of ITQR for female group of student teachers as evident through their classroom interaction matrix is 95.2% which is slightly larger than that of total groups of student teachers and that of male group of student teachers.

**Content cross Ratio (CCR):**

This was obtained as the ratio of the frequencies of rows 4 and 5 and columns 4 and 5 divided by total frequencies of the master matrix and multiplied by 100. Thus, content cross ratio for the total group as evident from the master matrices for the total group is as follows:

\[
\text{Content cross Ratio} \quad CCR = \frac{\text{sum of frequencies of columns 4 & 5}}{\text{total frequencies}} + \frac{\text{sum of frequencies of rows 4 & 5}}{\text{total frequencies}} \times 100
\]
After substitution of the relevant values in the above formula CCR works out to be as follows for the total group

\[
\text{Content cross Ratio} = \frac{8 + 32 + 472 + 13794}{18000} \times 100
\]

\[
= \frac{14306}{18000} \times 100
\]

\[
= 79.47\%
\]

It may, therefore, be stated that in the behavioural repertoire of the B.Ed. student teachers as manifest through their classroom interaction CCR is 79.47%.

A similar analysis for the male and female group of student teachers has been conducted on the basis of their respective master matrices and the results are as follows.

**Content cross Ratio (CCR) of male student teachers:**

After substitution of the relevant values in the above formula for CCR works out to be as follow:

\[
\text{Content cross Ratio} = \frac{5 + 21 + 264 + 6722}{9000} \times 100
\]

\[
= \frac{7012}{9000} \times 100
\]

\[
= 77.9\%
\]

It may be stated, therefore, that for the male group of student teachers the extent of CCR comes out to be 77.9%.
Content cross Ratio (CCR) of female teachers:

For the female group of student teachers after substitution of the relevant values in the above formula CCR works out as follows:

\[
\text{Content cross Ratio} = \frac{3 + 11 + 208 + 7072}{9000} \times 100
\]

(CCR For the female student teachers)

\[
= \frac{7294}{9000}
\]

\[
= 81.04\%
\]

It may, therefore, be stated that extent of CCR for female group of student teachers as evident from their classroom interaction matrix is 81.04% which is slightly larger than that of total group of student-teachers and that of male group of student-teachers.

Steady State Ratio (SSR):

This was obtained as the ratio of sum of the frequencies of rows - column (1-1) (2-2) (3-3) (4-4)...........(9-9) (10-10) divided by total frequencies of the master matrix and multiplied by 100. Thus, Steady State Ratio (SSR) for the total group as evident from the master matrices for the total group is as follows:

\[
\text{Steady State Ratio}
\]

\[
\text{SSR} = \frac{\text{sum of the frequencies of rows} - \text{column (1 – 1)………(10 – 10)}}{\text{total frequencies}} \times 100
\]

After substitution of the relevant values in the above formula SSR works out to be as follows:
Steady State Ratio = \frac{9 + 8 + 13794 + 23 + 12 + 153 + 32 + 95}{18000} \times 100

for the total group

(SSR for the total group)

= \frac{14126}{18000} \times 100

= 78.47%

It may, therefore, be stated that SSR for the total group of student teachers as manifest through their classroom interaction is 78.47%

A similar analysis for the male and female groups of student teachers has been attempted on the basis of their respective master matrices and the results are as follows:

**Steady State Ratio (SSR) for male teachers:**

For the male group of student teachers after substitution of the relevant values in the above formula SSR works out as follows

Steady State Ratio = \frac{8 + 5 + 6722 + 5 + 3 + 73 + 17 + 74}{9000} \times 100

(SSR for male group of student teachers)

= \frac{6907}{9000} \times 100

= 76.74%

It may, therefore, be stated that the extent of SSR for male group of student teachers as manifest through their classroom interaction matrix is 76.74%.
Steady State Ratio (SSR) for female teachers:

For the female groups after substitution of the relevant values in the above formula it works out as follows

\[
\text{Steady State Ratio} = \frac{1 + 3 + 7072 + 18 + 9 + 80 + 15 + 21}{9000} \times 100
\]

(SSR for female student teachers)

\[
= \frac{7219}{9000} \times 100
\]

\[
= 80.21\%
\]

It may, therefore, be stated that the extent of SSR for female group of student teachers as manifest through their classroom interaction matrix is 80.21%. Which is larger than that of the total group of student-teachers and that of the male group of student-teachers also?

Pupil Steady State Ratio (PSSR):

This was obtained as the ratio of sum of the frequencies of column - rows (8-8) and (9-9) divided by sum of the frequencies of column -rows (8-8) (8-9) and (9-9)(9 -8)of the master matrix and multiplied by 100. Thus, Pupil Steady State Ratio (PPSR) for the three groups was computed as follows.

Pupil Steady State Ratio

\[
= \frac{\text{sum of the frequencies in (8 – 8)(9 – 9)cells}}{\text{sum of the frequencies in (8 – 8)(8 – 9)(9 – 8)(9 – 9)cells}} \times 100
\]

After substitution of the relevant values in the above formula it works out to be as follow:

\[
\text{Pupil Steady State Ratio} = \frac{153 + 32}{153 + 4 + 32 + 19} \times 100
\]
(PSSR for the total groups)

\[
\frac{185}{208} \times 100
\]

\[
= 88.9\%
\]

It is apparent from the above that the PSSR (Pupil steady ration) in the interaction matrix of the total group is 88.90%.

Pupil Steady State Ratio for male teachers (PSSR):

PSSR for the male group of student teachers after substitution of the relevant values in the above formula of PSSR works out to be as follow:

\[
Pupil \ Steady \ State \ Ratio = \frac{73 + 17}{73 + 17 + 3 + 10} \times 100
\]

(PSSR for male student teacher)

\[
= \frac{90}{103} \times 100
\]

\[
= 87.37\%
\]

It may, therefore, be stated that the extent of PSSR for male group of student-teachers as manifest through their classroom interaction matrix is 87.37% which is less than that of total group of student teachers.

Pupil Steady State Ratio for female teachers (PSSR):

For the female group after substitutions of the relevant values in the above formula PSSR works out to be as follows

\[
Pupil \ Steady \ State \ Ratio = \frac{80 + 15}{80 + 1 + 15 + 9} \times 100
\]

(PSSR for female student teachers)

\[
= \frac{95}{105} \times 100
\]

\[
= 90.4\%
\]
It may, therefore, be stated that the extent of PSSR for female group of the student teachers as manifest through their classroom interaction matrix is 90.4% which is slightly larger than that of total group of student teachers and also the male group of student teachers.

**Indirectness (id):**

This was obtained as the ratio of frequencies of columns 1,2,3 divided by sum of frequencies of frequencies of columns 6,7 in the master matrices. Thus, the indirectness for the total group as evident from the master matrix for the total group works out to be as follows:

\[
\text{Indirectness (id)} = \frac{\text{Sum of frequencies of columns } 1,2,3}{\text{Sum of frequencies of columns } 6,7}
\]

After substitution of the relevant values in the above formula id works out to be as follows

\[
\text{Indirectness (id)} = \frac{7 + 168 + 44}{362 + 103}
\]

(id for the total group)

\[
= \frac{219}{465}
\]

\[
= 0.47
\]

It may, therefore, be stated that the id ratio for the total group of the student teachers as manifest through their classroom interaction is 0.47

A similar analysis for the male and female groups of student teachers has been conducted on the basis of their respective master matrices and the results are as follows.

**Indirectness (id) for male Teachers:**

id for male group of student teachers.
After substitution of the relevant values in the above formula id works out to be as follows

\[
\text{Indirectness (id)} = \frac{7 + 78 + 26}{163 + 58}
\]

(id for male student teachers)

\[
= \frac{111}{221}
\]

\[
= 0.50
\]

It may, therefore, be stated that in the behavioural repertoire of the male student teachers as manifest through their classroom interaction id was 0.50 which is almost identical with that of total group of student teachers.

**Indirectness (id) for female Teachers:**

The id for the female group of student teachers after substitution of the relevant values in the above formula works out to be as follows

\[
\text{Indirectness (id)} = \frac{90 + 18}{199 + 45}
\]

(id for female student teachers)

\[
= \frac{108}{244}
\]

\[
= 0.44
\]

It may, therefore, be stated that the id for the female group of student teachers as manifest through their classroom interaction is 0.44 which is slightly less than that of total group and male group of student teachers.

From the foregoing analysis the findings may be summarized in the form percentages as shown through table 4.1 and further depicted through table 4.1 which follow :-
Table – 4.1 The values of ratios rendered in percentages for the twelve variables in respect of total, male and female groups of student teachers

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Variables</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Teacher Talk</td>
<td>90%</td>
<td>92%</td>
<td>91%</td>
</tr>
<tr>
<td>2</td>
<td>Pupil Talk</td>
<td>7.87%</td>
<td>6.81%</td>
<td>7.34%</td>
</tr>
<tr>
<td>3</td>
<td>Silence</td>
<td>2.12%</td>
<td>1.28%</td>
<td>1.70%</td>
</tr>
<tr>
<td>4</td>
<td>Teacher Response Ratio</td>
<td>33.43%</td>
<td>30.68%</td>
<td>32.00%</td>
</tr>
<tr>
<td>5</td>
<td>Teacher Question Ratio</td>
<td>7.85%</td>
<td>6.52%</td>
<td>7.18%</td>
</tr>
<tr>
<td>6</td>
<td>Pupil Initiation Ratio</td>
<td>9.73%</td>
<td>7.01%</td>
<td>8.47%</td>
</tr>
<tr>
<td>7</td>
<td>Teacher Immediate Response Ratio</td>
<td>53.61%</td>
<td>63.01%</td>
<td>58.01%</td>
</tr>
<tr>
<td>8</td>
<td>Instantaneous Question Ratio</td>
<td>91.17%</td>
<td>95.20%</td>
<td>93.00%</td>
</tr>
<tr>
<td>9</td>
<td>Content Cross Ratio</td>
<td>77.91%</td>
<td>81.04%</td>
<td>79.40%</td>
</tr>
<tr>
<td>10</td>
<td>Steady State Ratio</td>
<td>76.74%</td>
<td>80.20%</td>
<td>78.47%</td>
</tr>
<tr>
<td>11</td>
<td>Pupil Steady State Ratio</td>
<td>87.37%</td>
<td>90.40%</td>
<td>88.9%</td>
</tr>
<tr>
<td>12</td>
<td>Indirectness</td>
<td>0.50</td>
<td>0.44</td>
<td>0.47</td>
</tr>
</tbody>
</table>
Figure 4.1 Graphical Representation of twelve variables in respect of total, male and female groups of student-teachers
Discussion based on results

On the basis the summary of results in respect of classroom interactive styles of B.Ed. student-teachers, it may be observed from the table 4.1 (a), that the value of teacher talk ratio for total group of student-teachers is 91% and for the female group it is found to be 90% and for the female group it is 92% which shows that the teacher talk of male group is relatively less than that of the teacher talk of female group of student teachers and the total group of student-teachers.

It is also apparent from the findings that the in respect of pupil talk ratio of student-teachers, the value for the total group of student-teachers is found to be 7.34% and for female student-teachers it is 6.81% whereas for pupil talk ratio for male student-teachers it is 7.87% which indicates that pupil talk ratio of male student-teachers is slightly more than that of pupil talk ratio of female group student-teachers and total group of student-teachers.

In the classroom interaction setting, it has been observed that the value of silence or confusion for total group of student-teachers is found to be 1.70% and for female group of student it is 1.28% whereas for male group of student-teachers it is found to be 2.12 which suggests that the percentage ratio of silence or confusion is more than that of female group of student-teachers as also that of total group of student-teachers. Similarly for the teacher response ratio it has been observed that the value of teacher response ratio for total group of student-teachers is 3.00% and for female group of student teachers it is found to be 30.68% whereas the value for male group of student teacher is found to be 33.43% which implies that the value is found to be slightly greater than that of female group of student-teachers and also that of the total group of student-teachers.
The table further reveals that the teacher question ratio of male student-teacher is 7.85% and for female group of student-teachers it is 6.52% whereas for total group of student-teachers it is 7.18%. Thus, the value of teachers question ratio for male group of student teacher is slightly more than that of the value of teachers question ratio of female group of student-teachers while slightly greater than that of total group of student-teachers.

Similarly is case of pupil initiation ratio, the value of pupil initiation ratio for total group of student-teachers is 8.47% and for female group of student-teacher it is 7.01% whereas the value of pupil initiation for male group of student teachers ratio is found to be 9.73% which show that this value is slightly greater than that of female group of student-teachers and for total group of student-teachers.

In the case of teachers immediate response ratio, the value for female group of student-teacher is 63.01% and for male group of student teacher it is 53.61% whereas for total group of student teacher it is 58.01%. On the basis of this observation it may be stated that the value of teacher immediate response ratio for female student teacher is found to be slightly greater than that of male group of student-teachers and for total group of student-teachers.

Similar observation may be adduced in respect of the interaction variable instantaneous question ratio. The value of instantaneous question ratio for female group of student-teacher is 95.20% and for male group of student-teacher it is 91.17% whereas for total group of student-teacher it is 93%. It is evident from the findings that the value of instantaneous question ratio for female group is found to be greater than that of
instantaneous response ratio for male group of student-teachers and for total group of student teachers.

While effecting a comparison of the values of content cross ratio for B.Ed. student-teachers it may be noted that the value of content cross ratio for total group is 79.40% and for male group of student-teacher is 77.91% whereas for female group of student-teachers it is 81.04%. It is clear from these observations that the content cross ratio for female group is found to be slightly greater than that of the value of content cross ratio for male group of student-teachers and for total group of student-teachers.

Similar result have been sighted in respect of the interaction variable steady state ratio. The value of steady state ratio for total group of student-teachers is 78.47% and for male group of student-teachers it is 76.74% whereas the value of steady state ratio for female group of student-teachers it is 80.20% which is found to be a bit more than that of total group of student-teachers and male group of student-teachers both.

In the case of the findings in respect of the variables pupil steady state ratio, the percentage value of steady state ratio for total group of student–teacher is 88.9% and for male group of student-teacher it is 87.37% whereas the value of pupil steady state ratio for female group is 90.40% which indicates that pupil steady state ratio for female group is marginally more than that of male group of student-teachers and total group of student–teachers.

A similar situation is obtainable in respect of id ratio where it is 0.47 for the total group, 0.50 for the male group and 0.44 for the female group of student teachers. It may be asserted, therefore, that in respect of
classroom interaction pattern, there is no substantial difference perceptible in the classroom interactional settings as observed in this study.

4.2 Relationship between self efficacy and interaction style

In the present research the substantive hypotheses formulated in respect of self efficacy and interaction styles postulated that the former influences the latter. In other words, the self-efficacy of a student teacher is likely to influence his/her interaction style in the classroom instruction. This hypothesis was put to test through setting of a cross break for the total group as well as for the male and female groups of B.Ed. student teachers. Table 4.2 depicts the results in respect of the extent of association perceived between indicators of self efficacy and indirectness as obtainable from the cross break constituted for the purpose for the total group of B.Ed. student teachers.

**Table 4.2 Results in respect association between self efficacy and interaction style**

<table>
<thead>
<tr>
<th>Self efficacy</th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>II</td>
<td>IIII</td>
<td>II</td>
<td>20</td>
</tr>
<tr>
<td>M</td>
<td>II</td>
<td>IIII</td>
<td>III</td>
<td>19</td>
</tr>
<tr>
<td>L</td>
<td>III</td>
<td>III</td>
<td>III</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>07</td>
<td>25</td>
<td>28</td>
<td>60</td>
</tr>
</tbody>
</table>

**Contingency table for Self efficacy**

<table>
<thead>
<tr>
<th>L</th>
<th>M</th>
<th>H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 (2.33)</td>
<td>7 (8.33)</td>
<td>11 (9.33)</td>
<td>20</td>
</tr>
<tr>
<td><strong>2 (2.22)</strong></td>
<td>9 (7.92)</td>
<td>8 (8.87)</td>
<td>19</td>
</tr>
<tr>
<td>3 (2.45)</td>
<td>9 (8.75)</td>
<td>9 (9.8)</td>
<td>21</td>
</tr>
<tr>
<td>7</td>
<td>25</td>
<td>28</td>
<td>60</td>
</tr>
</tbody>
</table>
Chi square value for each cell $= \frac{(fo - fe)^2}{fe}$

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.05</td>
<td>0.21</td>
<td>0.3</td>
</tr>
<tr>
<td>0.02</td>
<td>0.15</td>
<td>0.09</td>
</tr>
<tr>
<td>0.12</td>
<td>0.007</td>
<td>0.065</td>
</tr>
</tbody>
</table>

Total Chi square value $= 1.012$ which is not significant with a Degree of freedom $df = 4$

The value of contingency ‘c’ works out to be as follows.

$$c = \sqrt{\frac{1.012}{61.912}} = \sqrt{0.0166}$$

$$c = 0.13$$

It may be observed from table 4.2 that the value of chi square for estimating the extent of association between self efficacy scores and indirectness comes out to be 1.012 which is statistically not significant. Accordingly the value of contingency co-efficient works out to be 0.13 which tends to reinforce the contention that indirectness of student-teachers and their self efficacy scores are not related. This, however, may also be treated as an evidence for a low degree of relationship between the two variables. Thus, it lends support by and large to the averment in respect of research hypothesis (Hoi) that ‘the self efficacy of student teachers influences their interaction styles’, does not seem to be sustainable in the face of the evidence available. This finding may, thus, be
the basis for stating that the classroom interaction styles although are not contingent on the self efficacy of student teacher being high, medium or low all the same there appears to be a low degree of association owing primarily to the training and other constraints in teacher education programme. With regard to the male group the situation is delineated through table 4.3

**Table 4.3 RELATION BETWEEN SELF EFFICACY AND id RATIO FOR MALE GROUP OF STUDENT TEACHERS**

<table>
<thead>
<tr>
<th>Self efficacy id ratio</th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>0</td>
<td>III</td>
<td>II</td>
<td>10</td>
</tr>
<tr>
<td>M</td>
<td>II</td>
<td>II</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>L</td>
<td>I</td>
<td>III</td>
<td>I</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>03</td>
<td>08</td>
<td>19</td>
<td>30</td>
</tr>
</tbody>
</table>

Contingency table of self efficacy

<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>3 (2.67)</td>
<td>7 (6.3)</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2 (2.67)</td>
<td>6 (6.3)</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>3 (2.67)</td>
<td>6 (6.3)</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>19</td>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>
Chi square value for each cell $= \frac{(fo - fe)^2}{fe}$

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.04</td>
<td>0.08</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.17</td>
<td>0.014</td>
</tr>
<tr>
<td>0</td>
<td>0.04</td>
<td>0.014</td>
</tr>
</tbody>
</table>

Value of total chi square $= 2.36$ Which is not significant.

Degree of freedom $df = 4$

$$Value \text{ of } C = \sqrt{\frac{2.36}{32.36}}$$

$$= \sqrt{0.0720}$$

$$C = 0.27$$

It is apparent from table 4.3 that the value of chi square for self efficacy scores and id ratio as it works out from the cross break comes to be $2.36$, which is again not significant. The value of contingency coefficient which is $0.27$ is again not significant. In the light of this evidence it may be stated that interaction styles of male student teachers although do not depend on their self efficacy scores there seems to be a moderate to low association between the two variables.

For the female group the cross break and the statistical analysis attempted has been shown through table 4.4
### Table 4.4 RELATION BETWEEN SELF EFFICACY AND id RATIO FOR FEMALE GROUP

<table>
<thead>
<tr>
<th>Self Efficacy Id</th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>II</td>
<td>III</td>
<td>III</td>
<td>10</td>
</tr>
<tr>
<td>M</td>
<td>II</td>
<td>III</td>
<td>I</td>
<td>10</td>
</tr>
<tr>
<td>L</td>
<td>II</td>
<td>III</td>
<td>I</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>06</td>
<td>15</td>
<td>09</td>
<td>30</td>
</tr>
</tbody>
</table>

Contingency table of Self efficacy:

<table>
<thead>
<tr>
<th>L</th>
<th>M</th>
<th>H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 (2)</td>
<td>3 (5)</td>
<td>5 (3)</td>
<td>10</td>
</tr>
<tr>
<td>2(2)</td>
<td>6 (5)</td>
<td>2 (3)</td>
<td>10</td>
</tr>
<tr>
<td>2(2)</td>
<td>6 (5)</td>
<td>2 (3)</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>15</td>
<td>9</td>
<td>30</td>
</tr>
</tbody>
</table>

Chi square for each cell = \( \frac{(fo - fe)^2}{fe} \)

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.80</td>
<td>1.33</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0.20</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0.20</td>
<td>0.33</td>
<td></td>
</tr>
</tbody>
</table>

Total chi square = 3.19
Which is not significant.
Degree of freedom df = 4
Value of \( C = \frac{\sqrt{3.19}}{\sqrt{33.19}} \)

\[ = \sqrt{0.0961} \]

\( C = 0.31 \)

It may be noted from table 4.4 that the value of chi square is 3.19 which is again not found to be statistically significant. The value of contingency co-efficient C is 0.31 which is also indicative of a low to moderate relationship between self efficacy and interaction styles of the female group of student teachers.

On the basis of the testimony available and discussed in the preceding pages, it appears that the hypothesis suggesting the dependence of interaction style on self efficacy of B.Ed. student teachers although cannot be supported and sustained in respect of the total group but the same may be treated as acceptable for the male and the female groups of the B.Ed. student teachers when taken separately.

**4.3 Relationship between locus of control and interaction styles**

The second hypothesis of this study related to exploring the extent of relationship between the two variables— the locus of control and interaction styles of B.Ed. student teachers. This hypothesis has been put to test through forming cross breaks in respect of these variables for the total group, the male group and the female group of B.Ed. student teachers. Table 4.5 depicts the findings in respect of locus of control as associated with interaction styles for the total group of B.Ed. student teachers.
Table 4.5 Relation between locus of control and id ratio of total group:

<table>
<thead>
<tr>
<th>Locus of Control</th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>II</td>
<td></td>
<td>II</td>
<td>20</td>
</tr>
<tr>
<td>M</td>
<td></td>
<td></td>
<td>III</td>
<td>20</td>
</tr>
<tr>
<td>L</td>
<td></td>
<td></td>
<td>II</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>07</td>
<td>31</td>
<td>22</td>
<td>60</td>
</tr>
</tbody>
</table>

Contingency table of Locus of control

<table>
<thead>
<tr>
<th>L</th>
<th>M</th>
<th>H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>11</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>0</td>
<td>12</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>08</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>07</td>
<td>31</td>
<td>22</td>
<td>60</td>
</tr>
</tbody>
</table>

The number in the brackets indicates the expected frequencies (fe)

for each cell chi square \[\chi^2 = \frac{(fo - fe)^2}{fe}\]

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.05</td>
<td>0.04</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>2.33</td>
<td>0.27</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>3.6</td>
<td>0.52</td>
<td>0.01</td>
<td></td>
</tr>
</tbody>
</table>

Total chi square for all 9 cells is =6.35 Which is not significant with

degree of freedom df = 4

\[C = \sqrt{\frac{6.35}{66.35}}\]
It is evident from the perusal of table 4.5 that the value of chi square obtainable from the cross breaks is 6.35 which is statistically not significant. The value of contingency coefficient works out to be 0.30 which again shows a moderate relationship between locus of control and interaction styles of B.Ed. student teachers as adjudged through id ratio. The research hypothesis in this regard as postulated states that locus of control of a teacher determines the interaction styles of student teachers. The hypothesis so stated is, therefore, retained. Accordingly it may be averred that the locus of control as a personality variable contributes to the interaction style of B.Ed. student teachers in a modest way. This situation, however, may be considered more favourable in case the teacher education programmes which would undertake and lay stress on useful interventions to promote internality as a personality disposition in specific terms.

This position has been further examined in respect of the male and female groups of student teachers separately. Table 4.6 provides the cross break as also the results obtained in this regard.

**Table 4.6 Relation between Locus of Control and id ratio for male group**

<table>
<thead>
<tr>
<th>Locus of Control</th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Id</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>II</td>
<td>III</td>
<td>I</td>
<td>II</td>
</tr>
<tr>
<td>M</td>
<td>0</td>
<td>III</td>
<td>I</td>
<td>III</td>
</tr>
<tr>
<td>L</td>
<td>II</td>
<td></td>
<td>II</td>
<td>I</td>
</tr>
<tr>
<td>Total</td>
<td>04</td>
<td>19</td>
<td>07</td>
<td>30</td>
</tr>
</tbody>
</table>
Contingency table of Locus of Control

<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2 (1.33)</td>
<td>6 (6.33)</td>
<td>2 (2.33)</td>
<td>10</td>
</tr>
<tr>
<td>0</td>
<td>0 (1.33)</td>
<td>6 (6.33)</td>
<td>4 (2.33)</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>2 (1.33)</td>
<td>7 (6.33)</td>
<td>1 (2.33)</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>19</td>
<td>07</td>
<td>30</td>
</tr>
</tbody>
</table>

For each cell chi square \( \frac{(fo - fe)^2}{fe} \)

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.34</td>
<td>0.02</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>1.33</td>
<td>0.02</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>0.34</td>
<td>0.07</td>
<td>0.76</td>
<td></td>
</tr>
</tbody>
</table>

Total chi square for 9 cells is = 4.13 Which is not significant.

degree of freedom \( df = 4 \)

Value of \( C = \sqrt{\frac{4.13}{34.13}} \)

\[ C = 0.36 \]

It may be observed from table 4.6 that the value of chi square is 4.13 which is statistically not significant. This is further substantiated by the value of contingency co efficient which works out to be 0.36 showing only moderate relationship between locus of control and interaction style of B.Ed. student teachers. The research hypothesis as indicated earlier is therefore, not accepted for the male group of B.Ed. student teachers.
Notwithstanding these findings, it may be posited that with improved and efficacious training procedures, the association between internality as an indicator of locus of control and indirectness in interaction styles may be considerably enhanced.

Table 4.7 further attempts to summarize the results in respect of this hypothesis with reference to the female group of student teachers.

**Table 4.7 Association of locus of control and id ratio**

<table>
<thead>
<tr>
<th>Locus of control</th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>0</td>
<td>III</td>
<td>III</td>
<td>10</td>
</tr>
<tr>
<td>M</td>
<td>0</td>
<td>I</td>
<td>III</td>
<td>10</td>
</tr>
<tr>
<td>L</td>
<td>III</td>
<td>I</td>
<td>III</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>03</td>
<td>12</td>
<td>15</td>
<td>30</td>
</tr>
</tbody>
</table>

**Contingency table of Locus of Control**

<table>
<thead>
<tr>
<th>L</th>
<th>M</th>
<th>H</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5 (4)</td>
<td>5 (5)</td>
<td>10</td>
</tr>
<tr>
<td>0</td>
<td>6 (4)</td>
<td>4 (5)</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>1 (4)</td>
<td>6 (5)</td>
<td>10</td>
</tr>
<tr>
<td>0</td>
<td>12</td>
<td>15</td>
<td>30</td>
</tr>
</tbody>
</table>

**Value of chi square for each cell**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.25</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>0.20</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2.25</td>
<td>0.20</td>
<td></td>
</tr>
</tbody>
</table>
Total chi square = 9.90 Which is significant at 0.05 level and not significant at 0.01 level.

Degree of freedom = 4

\[ C = \sqrt{\frac{9.90}{39.90}} \]

\[ C = 0.50 \]

A look at table 4.7 reveals that the value of chi square comes out to be 9.90 which is observed to be statistically significant at 0.05 level but not at 0.01 level. The corresponding value of contingency coefficient is 0.50 which indicates moderate to high relationship between locus of control and interaction styles for B.Ed. student teachers of female group. This further lends support to the belief that locus of control does influence interaction style which is considerably supported by the evidence as shown above in respect of female student teachers but not so for the male group of student teachers. The research hypothesis that locus of control influences interaction styles of student teachers is, therefore, partially accepted but with considerable confidence.

On the basis of this evidence it might be asserted that locus of control of student teachers does influence the interaction styles making a difference between male and female groups.

4.4 Relationship among indirectness, self efficacy and locus of control

In this study the third hypothesis pertained to finding out the conjoint effect of self efficacy and locus of control on indirectness of teaching behaviour. The hypothesis in this regard was set up as follows.
“The interaction styles of student teachers are influenced by locus of control and self efficacy separately as well as conjointly.”

Table 4.8 summarizes the results as obtainable from a cross break set up for testing this hypothesis and through working out the value of chi square and contingency coefficient.

| Table 4.8 Relationship among indirectness, self efficacy and locus of control |
|----------------------------------|-----------------|-----------------|-----------------|-----------------|
| Indirectness | Self efficacy | Locus of Control | Total |
|               | High          | Low             | High Internality | Low Externality |
| High         |               |                 |                 |                 |
| Low          |               |                 |                 |                 |
| Total        | 37            | 23              | 38              | 22              | 120             |

Contingency table for calculation

<table>
<thead>
<tr>
<th>Indirectness</th>
<th>Self efficacy</th>
<th>Locus of control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>11 (9.86)</td>
<td>9 (10.13)</td>
<td>32</td>
</tr>
<tr>
<td>Low</td>
<td>26 (27.13)</td>
<td>29 (27.86)</td>
<td>88</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>38</td>
<td>120</td>
</tr>
</tbody>
</table>
Value of chi square for each cell

<table>
<thead>
<tr>
<th>Indirectness</th>
<th>Self efficacy</th>
<th>Locus of Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>H</td>
<td>0.13</td>
<td>0.21</td>
</tr>
<tr>
<td>L</td>
<td>0.07</td>
<td>0.78</td>
</tr>
<tr>
<td></td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>H</td>
<td>0.17</td>
<td>0.22</td>
</tr>
<tr>
<td>L</td>
<td>0.05</td>
<td>0.11</td>
</tr>
</tbody>
</table>

Total chi square of 6 cells is \(= 1.74\) which is not significant
degree of freedom \(df = 3\)

\[
\text{Contingency } C = \sqrt{\frac{1.74}{61.74}}
\]

\[
= \sqrt{0.0281}
\]

\[
C = 0.16
\]

4.5 Summing up

Thus, on the basis of this evidence it may be adduced that both the
variables such as the self efficacy and locus of control when operating
conjointly do not tend to influence classroom interaction styles of student
teachers in a substantial way. There may be several factors which may be
cited to explain this situation but from the present study and the evidence
flowing from it, it will be worthwhile to hold that self efficacy and locus of
control do not seem to influence the classroom interaction of B.Ed. student
teachers as the contents and processes of training situations and the
variables related thereto might be otherwise swaying in a clandestine
manner their functioning in this regard. This has important implications for
revisiting the teacher education programmes in the state in particular which will be elaborated in the following section.

The classification in term high and low was done in the following manner: range of id categorised as high and low

- 0.67 – 5 High
- 0.62 – 0 –Low

Range of Locus of Control categorised as high and low

- 112 – 137 – H
- 111 – below – L

Self efficacy

- 181 -192 – H
- 180 – below – L

Related data is available in Appendix V.