CHAPTER-V

Generalisations, Conclusions, Implications and Suggestions for further Research

In the present chapter the data as analysed and discussed in the previous chapter have been made the basis of arriving at generalisations and conclusions which seem to be adequately warranted and which provide the basis for the support or otherwise of research hypothesis underlying this study. The implications of the study for further research have also been adduced and its implications have been systematically indicated for revisiting teacher education programme in the state of Jharkhand which was the sample frame indentified for this study.

5.1 Generalisations Adduced

The generalisations emanating from the findings have been put in three sections. The first section presents the generalisation in respect of teaching behaviour variables while the second section embodies the findings in respect of relationship between self efficacy and interaction styles of student-teachers while the third section highlights the results in the context of the relationship between locus of control and interaction styles of student-teachers. Subsequently, there is a separate sub-section provided in which the findings in respect of the relationship among indirectness, self efficacy and locus of control have been endorsed as plausible averments and which pertains to the third hypothesis of research intended to focus on the conjoint effect of self efficacy, and locus of control on indirectness of teaching behaviour.
The following generalisations appear to emerge from the analysis of teaching behaviour of student-teachers in respect of twelve variables as mentioned and discussed in the previous chapter.

- The teacher talk (TT) for the total group comes out to be 91% whereas for the male group of student teachers it is 90% and for the female group of student teachers it is 92%. Thus there seems to be no difference in the teacher talk of the three groups.

- The Pupil talk (PT) for the total group has been found to be 7.34%, while for male group of student teachers it is 7.87% and for female group of student teachers it is 6.81%. Here also there appears to be no difference or disparity in the pattern of pupil talk in respect of all the three groups of student-teachers.

- As to the silence or confusion in the classroom interaction setting, the situation appears to be almost identical. Thus, the silence or confusion for the classroom interactional setting for the total group is 1.70%, for the male student teachers, it is 2.12% and for female student teachers it is 1.28%. Thus the silence or confusion in the teaching behaviour associated with male student-teachers seems to be slightly more than that of the total group and also that of the female group of student-teachers.

- The teacher response ratio (TRR) as observed for the total group of student teachers has been found to be 32% while for male group of student teachers it has been found to be 33.43% and for female group of student teachers it is 30.68%. This shows that the teacher response ratio in the teaching behaviour of female teachers is slightly less than that of male group of student teachers as also that of the total group of student teachers.
The teacher question Ratio (TQR) for the total group has been found to be 7.18%, for male group of student teachers it is 7.85% and for female group of student teachers it is 6.52%. Here also there appears to be no disparity in the pattern of teacher question ratio of all the three groups of student-teachers.

As to the pupil Initiation Ratio (PIR) in the classroom interaction setting the situation appears to be somewhat identical. Thus, the pupil initiation ratio for the classroom interactional setting for the total group is 8.47%; for the male group of student teachers it is 9.73% and for female group of student teachers it is 7.01%. Thus, it may be stated that the pupil initiation ratio in the teaching behaviour associated with male student-teachers appears to be slightly more than that of the total group or the female group of student-teachers.

The teacher Immediate Response Ratio (TIRR) for the total group has been found to be 58.01%, whereas for the male group of student teachers it is 53.61% and for the female group of student teachers it is 63.01%. Thus, there seems to be no variation in the Teacher Immediate Response Ratio of the total group as well as female group of student teachers although it is quite less in magnitude for the male group of student teachers.

The Instantaneous Question Ratio (IQR) as observed for the total group has been found to be 93.00% while for male group of student teachers it has been found to be 91.17% and for female group of student teachers it is 95.20%. This shows that the instantaneous question ratio in the teaching behaviour of female group of student teacher is slightly more than that of male group of student teachers and also that of the total group of student teachers.
• The Content Cross Ratio (CCR) for the total group has been found to be 79.40%, 81.04% for female teachers and 77.91% for male teachers. Here also there appears to be slight variation in the pattern of Content Cross Ratio in respect of all the three groups of student teachers.

• The Steady State Ratio (SSR) as observed for the total group has been found to be 78.47% while for male student teachers it has been found to be 76.74% and for female student teachers it is 80.20%. This shows that the Steady State Ratio in the teaching behaviour of male group of student teachers is slightly less than that of female group of student teachers as also that of the total group of student teachers.

• As to the Pupil Steady State Ratio (PSSR) in the classroom interaction setting the situation appears to be almost identical. Thus the pupil steady state ratio for the classroom interactional setting for the total group is 88.9%, for the male group of student teachers it is 87.37% and for female group of student teacher it is 90.40%. Thus, in the case of pupil steady state ratio also in the teaching behaviour associated with female group of student-teachers the value seems to be slightly more than that of the total group or the male group of student-teachers.

• As to the indirectness (id) in the classroom interaction setting the situation does not appear to be quite disparate. Thus the indirectness for the classroom interactional setting for the total group is 0.47 while for the male group of student teachers it is 0.50 and for female group of student teacher it is 0.44. Thus, apparently the indirectness in the teaching behaviour associated with male
group of student teachers is slightly more than that of the total
group or the female group of student-teachers.

Relationship between self efficacy and interaction styles

The value of contingency co-efficient as worked out via chi-square
to ascertain the relationship between self efficacy and interaction styles of
student-teachers comes out to be 0.13. This value shows a very low degree
of relationship and on the basis of this evidence it may be stated that self
efficacy of student-teachers does not seem to influence in substantial way
the interaction style of student teachers. In other words, it may be stated
that classroom interaction style does not appear to have been swayed by
the self efficacy scores of student-teachers. Such a situation, however, does
not appear to emerge for male and female groups of student-teachers when
taken separately. It may be observed that the value of contingency
coefficient showing the relationship between self efficacy and id ratio of
male group of student teachers is obtainable as 0.27 while for female group
of student teachers it is 0.31. Both the values of contingency co-efficient
are indicative of a moderate relationship between self efficacy and indirectness of classroom interaction style for male and female group of
students teachers when viewed separately. The value of 'C' for female
group of student teachers appears to be slightly more (0.31) than that of
male group of student-teachers (0.27).

On the basis of this testimony it may be generalised only to the
extent that although relationship between self efficacy and indirectness of
interaction style of student-teachers of male and female groups appears to
be somewhat modest, for the group as a whole it does not seem to be
sustainable. It may, therefore, be stated broadly that the interaction styles
of male and female group of student-teachers, may be considered to be contingent on their self efficacy scores.

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

The analysis in respect of the relationship between locus of control and interaction styles of B.Ed. student-teachers has been attempted again through setting up a cross break for estimating contingency coefficient via chi-square. The value of 'C' in this regard has been observed to be 0.30 which shows a moderate relationship between locus of control and indirectness of student-teachers.

This situation is observed to be quite different when the analysis was attempted for male and female groups of student-teachers separately. Thus, for the male group of student teachers, the value of 'C' comes out to be 0.36 which is higher than that of the value for total group. For the female group of student-teachers, the value of 'C' is observed to be 0.50 which is much higher than the value of 'C' for male group of student teachers and the group of student-teachers as a whole.

It may, thus, be generalised to the extent that the interaction style in terms of indirectness appears to be quite significantly related to locus of control of both female group of student-teachers as also for the male group of student-teachers. In other words, on the force of this evidence, it will not be hazardous to hold that locus of control which is an important factor leading and contributing to internality and externality characteristics of personality dispositions or various other related attributes of student-teachers, do seem to influence their classroom interaction styles in a major way.

**Relationship among indirectness, self efficacy and locus of control :**

The third hypothesis of the present study was concerned with investigation of the joint effect of self efficacy and locus of control on
indirectness of classroom interaction style. The analysis as conducted in this regard was on the basis of a cross break constituted for the purpose. In this cross break self efficacy and locus of control scores were made the basis for identifying high and low categories while indirectness of classroom interaction style was also indicated in the two categories- high and low using a specific bench mark decided for the purpose. Thus, the entire analysis through this cross break was in terms of a $2 \times 2 \times 2$ cross break table. The value of 'C' was obtained as 0.16 which shows a low contingency between indirectness of teaching interaction style and the self efficacy and locus of control treated conjointly. The findings do not seem to suggest that self efficacy and locus of control when taken together as variables influencing classroom interaction styles do not seem to have a high positive contribution although independently their contribution appears to be significant. This tantamount to asserting that student teachers’ self efficacy and locus of control characteristics contribute in positive terms in so far as their classroom indirectness is concerned but the same appears to be interacting to the extent that their conjoint is slightly less or low in absolute terms so to say.

5.2 Conclusions of the study

On the basis of the results as summarized in the previous chapter from the findings and their analysis attempted in respect of classroom interaction styles of B.Ed. student-teachers on the basis of master matrix for the total group of student-teachers as a whole followed by that of male and female group of student teachers separately, it may be concluded in respect of twelve variables as formulated and defined for the purpose. These variables are teacher talk (TT), Pupil talk (PT), silence (Sc), 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). The findings lead to the final observations that in terms of interaction variables there is no discernible difference in the variables, except in the case of (PIR), (TIRR), (SSR) and (PSSR) when viewed in terms of total group of student teachers and the male and female sub-groups. A similar situation is perceptible 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 appears to be no substantial difference manifest in the classroom interactional settings as disclosed and analysed in the present research.

On the basis of the generalisations as indicated in the previous section, the following specific conclusions may, thus, be adduced in the light of the research hypotheses formulated for this study.

- The substantive research hypothesis as set forth were, the self efficacy of student-teachers influences their interaction styles, the locus of control of a student-teachers being external and internal determines their interaction styles and the interaction styles of student-teachers are influenced by locus of control and self efficacy separately as well as conjointly as to the first substantive research hypothesis it may be concluded that interaction style of student-teachers seems to be influenced by self efficacy although it suggests only a low degree of relationship when total group of student-teachers is considered. However, when the male and female groups of student teachers are taken separately, the relationship between self efficacy and interaction style of student-teachers appears to scale up a little which indicates a moderate degree of relationship.
Apparently it may be safe to suggest that self efficacy of student-teachers which is a factor of personality characteristics does influence the interaction style of student-teachers although in a moderate way.

- As to the relationship between locus of control and interaction style of B.Ed. student-teachers it may be somewhat convincing to suggest that the internality and externality as evident from the scores of locus of control tend to contribute significantly towards the classroom interaction styles.

- From the generalisations arrived at in respect of investigating the joint effect of self efficacy and locus of control on interaction style of student-teachers in the classroom the irresistible conclusion seems to emerge is that both the variables when put together for probe into their contribution do not significantly tend to influence the interaction style of student-teachers. This requires further study by imposing appropriate controls on variables related to self efficacy and locus of control, and other self related personality attributes.

5.3 **Implications of the study**

The present research has manifold implications for revamping teacher education programme in the state of Jharkhand as it is being conducted now. The state being newly carved out from its original the state of Bihar has inherited most of its problems of planning and effectively running the programmes especially in the domain of teacher education. It may be worthwhile to mention in this connection that the planning and preparation of teachers has been quite a neglected sector and there is hardly any serious attention paid to the demand and supply of teacher for the next ten fifteen years. As such the development of teacher education
institution is quite adhoc and casual. The self financing institutions have been assigned this responsibility as the government sector appears neither keen nor concerned about its growth, development and management. The state has 105 teacher education institutions as at present out of which only one is in government sector. These self financing B.Ed. colleges have the recognition of National Council for Teacher Education, Delhi and are required to observe the guidelines and norms of the Council in letter and spirit. Despite observance of the guidelines the quality of the programme of B.Ed. raises several questions many vexed ones as to the content and methodology of imparting training. The course structures have been formally designed and developed by the concerned universities in the state but there is no adequate focus imparted to the quality part of these programmes. As such preparation of teachers has been rendered more or less a mere formality. In order to bring a quality face and to enhance the quality base of these programmes it is necessary that B.Ed. courses are revisited on priority and the National Curriculum Framework (2005) as well as N.C. F.T. (2009) in their improved versions, if any, are adopted as the main source of such exercise.

The present research has direct implications for rehashing the practical component of the B.Ed. programmes in as much as it should be skill based and should be derived from working through project and experiential learning. In the practical work being done now by B.Ed students skill development has escaped attention and as such the teaching behaviour of student teachers in neither focused nor emphasised through the practice teaching programme. In the context of the two variables such as locus of control and self efficacy in relation to interaction styles of classroom behaviour it may be pointed out that the findings of present study have great relevance.
Teaching efficacy programme as a part of practical work has to be designed carefully and a good many training sessions should be conducted to improve the personal as well as professional self efficacy of student-teachers in all the subject groups for which they are being prepared. In the self efficacy training a number of short term courses of duration of 10 to 15 days may be developed and made an integral part of the practicum prescribed in the B.Ed. course. In such self efficacy courses personal sense of accomplishment and fulfilment should be the main focus. A number of small units which should be in the nature of being awareness programmes, knowing one's self, developing understanding about self, learner’s self confidence enhancement and self analysis games should be specially prescribed to enrich the practical component.

The **locus of control** is another significant personality variable which should also be studied and made an integral part of the practical sessions. The student-teachers should be given special induction training to transform themselves from being external to being internal. This requires specific identification exercises for self appraisal to ascertain their level of externality and internality. The following suggestions may be specially helpful in designing practicum for this purpose:

- Self reflection sessions should be organised in which student-teachers will be directly involved in identifying their personal attributes.
- Knowing the student programme should be arranged before school attachments which will involve courses in simulation with a stress on learner characteristics.
- Empathy training in which student-teachers will undertake role playing for different classroom interactional situations involving the imagined learner problems should be organized invariably.
• Self understanding and self evaluation sessions should be conducted in the very beginning of the commencement of the academic schedule.

• Group discussions based on classroom situations for ensuring student involvement should be planned and organised frequently.

• Sensitivity training sessions with specific issues selected by the teacher educators for a discussion should be made prominent.

The classroom interactional styles of student-teachers should be specially probed in order to help them become indirect teachers with a potential and prospect for ensuring self learning ventures and creative learning practices in students. The training programmes should be improved to make them competency based emanating from practices in various teaching skills and should be the focus of practicum at the teacher education institution level. Every student-teacher before being attached to a practicing school should be given a compulsory simulation-cum-micro teaching training wherein the main emphasis should be on skill acquisition and skill enhancement in respect of classroom instructional processes and their impact on student positive self appraisal and understanding.

5.4 Suggestions for further Research:

The present study is a pioneering piece of research in so far as the teacher education scenario in the state of Jharkhand is concerned. Although it has been restricted to exploring a narrow domain of teacher-behaviour and its association with two important personality characteristics, it may provide a viable plank for improving and updating the content and process of teacher education in the face of the harsh realities with which these institutions have to effect a healthy and smooth adjustment. Notwithstanding these constraints, some suggestions may be offered to conduct researches in the allied area with intent to ensure
quality, competence and responsiveness of these institutions to the global concerns fast emerging now. First, the researches in teacher education should be directed at improving the competencies of student teachers by planning and implementing need based modular courses and presentations in respect of the overall course structures. Second, since teacher is a key factor in bringing about needed cognitive orientations in the learners, researches in teacher education should focus on development and promotion of teaching skill repertory of student teachers. Third, the student teachers should be frequently confronted with brain storming, freewheeling and open sessions for acquiring attitudinal dispositions necessary for organizing effective teaching and learning. Towards this end, action research interventions should be suitably thought of and given a trial by a few selected teacher education institutions in the state. Fourth, the entire course structure for the B.Ed. programme should be radically revamped by augmenting the practical components. For ensuring this a few pioneering studies should be conducted within the state of Jharkhand itself. Fifth, the teacher education sector should encourage interdisciplinary studies for identifying personality characteristics, needs and aspirations and the value based components so necessary in the present context.

In the end, it may be worthwhile to observe that these are some of the specific suggestions which may be considered essential for a revamp of teacher education in the state, although suggesting that it is neither exhaustive nor all encompassing for promoting human values and addressing quality concern issues. The findings of this research may, thus, be a pointer to the launch of several projects and interventions so necessary for imparting a face lift to the teacher education programmes in the current scenario.