SUMMARY, CONCLUSIONS, AND IMPLICATIONS

The purpose of the study, as indicated earlier, is three-fold. Firstly, it tests the effectiveness of Classroom Behaviour Training based on interaction analysis vis-a-vis conventional programme of student-teaching in developing responsiveness, indirectness and flexibility of teacher influence in the student-teachers. Secondly, the study attempts to investigate whether the student-teachers sustain and carry over the classroom interaction patterns learnt in the training institute to their actual teaching performance, when they assume charge of their designated positions in the teaching profession after the completion of their training. Lastly, it seeks to study the relationship between the Classroom Behaviour Training imparted to the student-teachers and the performance of pupils under their charge on adjustment to home, school, teacher, and peers; their dependency level; and classroom trust behaviour.
The study employs pretest-postest control group design in two phases. Fourteen variables are controlled to realize the above objectives. Twenty student-teachers, and three hundred and ninety eight pupils in their classes form the sample. In the first phase, the experimental group of ten student-teachers receives Classroom Behaviour Training (CBT) for eight weeks, while, the control group continues with its conventional programme of student-teaching. Pre-training-postraining observations of the two groups of student-teachers are obtained and analysed by using 2x2 covariance analysis adjusting postraining scores on classroom interaction patterns for pre-training scores. Three more postraining observations at different intervals are treated in the same way. In the second phase, pretest-postest scores of pupils under the charge of the two groups of student-teachers on PAAS, PADS, and FACTS are obtained and 2x2 analysis of covariance, adjusting postest scores for their initial ability is carried out.

The main findings of the study are summarised below:

1. Classroom Behaviour Training does change the classroom interaction patterns of the student-teachers, as is evident from the significant differences found in the interaction pattern scores of the experimental and the control
groups of student-teachers.

2. After their student-teaching, the student-teachers with CBT, score significantly higher on classroom interaction variables PPT, TRR, TQR, TRR 89, TQR 89, PIR, and MFR and score significantly lower on PTT, PSC, CCR, and SSR, than student-teachers with conventional programme of student-teaching.

3. The student-teachers with Classroom Behaviour Training, score higher on PSSR than the student-teachers with conventional programme of student-teaching but the difference is not significant.

4. In posttraining I, the student-teachers with Classroom Behaviour Training scored significantly lower on PSC as hypothesized than the group of student-teachers with conventional programme of student-teaching. But the differences become non-significant in subsequent posttraining measurements.

5. The student-teachers with Classroom Behaviour Training sustain significant differences on classroom interaction patterns as compared to the student-teachers with conventional student-teaching even after 26 weeks of
their training.

6. Although the student-teachers with Classroom Behaviour Training, maintain significant differences on ten out of twelve interaction pattern scores, an examination of the means shows a slight tendency to decline, particularly in the last two measurements.

7. The pupils under the student-teachers with Classroom Behaviour Training score higher on adjustment to school, adjustment to teacher, general adjustment, dependency and classroom trust than pupils under the student-teachers with conventional programme of student-teachers.

8. The pupils under the student-teachers with Classroom Behaviour Training score higher on adjustment to home and to peers than the pupils under the student-teachers with conventional programme of student-teaching. The differences, however, are not significant.

Conclusions

On the basis of the findings of the present study, a few conclusions can be drawn. Firstly, it is possible to modify the classroom interaction patterns of student-
teachers along the desired lines with a suitable teacher education programme. Classroom Behaviour Training based on interaction analysis, as used in the present study, is more effective than the conventional programme of student-teaching in this respect. Secondly, most of the classroom interaction patterns acquired by student-teachers during their training based on Classroom Behaviour Training are likely to be sustained and carried to the actual field of operation when the student-teachers assume charge of their assigned positions in the teaching profession. Thirdly, the configuration of interaction patterns based on teacher responsiveness, indirectness, and flexibility appears to be related to better educational outcomes, in this study, in the area of adjustment. Lastly, this type of studies should be replicated, new ways of Classroom Behaviour Training explored and teacher education programme and programmes of instructional improvement in the country be reviewed in the light of the knowledge thus gained.

Implications

The present study, being a piece of applied research, has implications for educational practitioners as well as research workers. On the basis of the findings and the conclusions reported above, some specific implications for teacher education, teaching and research in the area are outlined in this section.
Contribution to Teacher Education

The findings regarding Classroom Behaviour Training indicate favourable results. If the results are viewed in conjunction with the 'presage-process' studies reviewed in chapter II, an optimistic image of a programme of improving teacher education emerges. If teachers or student-teachers know the teaching concept operationalized in terms of teaching behaviours, if they know how to analyse their own teaching behaviours, if they can formulate hypotheses about the teaching behaviours for the educational outcomes they want to engender in their pupils, and if they are provided with objective specific feedback regarding their observed teaching behaviours, there is a likelihood that they will modify their teaching behaviours accordingly. Classroom Behaviour Training based on interaction analysis is one such training programme. This has been tried out with live observers because still we are not in a position to provide sophisticated mechanical gadgets in the classroom. Thus, it is not costly in terms of material resources. Only human resources have to be mobilised and duly trained. Financial resources are required in as much as they are needed for training the personnel in the technique.

The system of interaction analysis used in this study has implications for the supervision of student-teaching as well. Here is a tool which can provide
objective and specific feedback to student-teachers about their teaching behaviour in contrast to the vague feedback the supervisors provide generally at the moment. The tool can be modified to suit the purpose, if needed. A modified system of interaction analysis combining affective as well as cognitive aspects of teaching has been developed by Jangira (1971) which is being tried out in the current year. There appears to be a rationale and the need for such efforts, if teacher education programmes are to be made more effective.

One of the findings indicates the tendency of the student-teachers to relapse into the original behaviours as the time passes. This may be due to the lack of periodical feedback needed by the teacher to analyse and evaluate his own teaching behaviours. Two things are suggested to make Classroom Behaviour Training programme more effective in the field. Firstly, scientific "inquiry projects" mentioned by Flanders (1970) may also be included and tried out in future Classroom Behaviour Training. It appears that these kinds of projects will develop a scientific spirit amongst teachers to study and carry out any modification of their teaching behaviour as per their needs. Secondly, till sufficient number of teachers are trained in interaction analysis, as far as possible, the student-teachers with Classroom Behaviour Training may be assigned teaching positions in pairs, so that they can
arrange for mutual feedback based on actual classroom observations continuously.

The study provides a model to evaluate teacher education programmes in terms of the subsequent teaching performance of the student-teachers and link it to the pupil performance, which is the ultimate goal of teacher education. The design of the evaluation models of teacher education may be made as per needs but here is an attempt to evaluate a part of the teacher education programme i.e. student-teaching. Turner (1971) and Rosenshine (1971) also stress the need for this type of work to validate our ad hoc teacher education programmes.

**Contribution to Teaching**

The present study helps teaching in two ways. Firstly, it tells the teachers how to modify their teaching behaviour. Secondly, it provides a configuration of teaching behaviour patterns that appear to be related to better pupil outcomes. For example, they know that if their behaviour patterns conform to responsiveness, indirectness, and flexibility of influence in the classroom, pupil adjustment improves. In conjunction with other "process-product" studies reviewed in chapter II, this study contributes to the knowledge of teacher effectiveness.
Research on Teaching

The study has provided some knowledge about improving student-teaching practices and teacher effectiveness to a limited extent. Some anticipated expectations from future research are natural. The conceptual image of the classroom teaching may be visualized as presented in figure VI-1.

As is evident from the figure VI-1, page 153, the present study touches only very limited aspects and even the exhaustive reviews on research on teaching appearing in the volumes of Encyclopaedia of Educational Research, Review of Educational Research, Gage (1963), Smith (1971), etc., revealed that we have touched only the fringe of this complex problem. Concerted systematic attempts have to be made to improve teaching. Some of the problems and directions of research are indicated below:

This study tried out one strategy of Classroom Behaviour Training as a means of developing the predeterminded teaching behaviour patterns. Improvement in the Classroom Behaviour Training to increase its effectiveness further either by way of economising the efforts and resources to be expanded in the process, or by way of developing more broad based and insight based teaching behaviours in the children, should be developed and tried out.
Fig. VI-1 Conceptual Model of Classroom Interaction
Systematic studies to evaluate effectiveness of the prevalent programmes of teacher education in terms of ultimate outcomes as envisaged in this study may be taken up by various agencies and institutions, which will provide data for improvement of the existing teacher education programmes.

This study and the studies reviewed earlier have neither explored nor identified all the relationships between teaching behaviour and educational outcomes. Probably, more correlational studies generating new hypotheses and controlled experiments to validate or reject the hypotheses generated will have to be taken up. In this study instructional content, instructional objectives and instructional materials could not be controlled in the second phase. Future studies may attempt in this direction to gain further insight. Wright and Nuthall (1970), and Christchurch (1971), are examples of systematic attempts in this direction.

The present study had teacher as the sampling unit and adjustment for initial ability was made through 'analysis of covariance'. It will be worthwhile to initiate a few studies based on pupil sampling on the basis of their ability and study the classroom interaction patterns. This may provide further insight into the problem.
This study used "low inference" level variables of classroom interaction. Rosenshine and Furst (1971) point out some promising results from studies using "high inference" level variables also. It may be worthwhile to include both types of variables in some studies and see the relative effectiveness of the two.

These are some of the problems, by no means exhaustive. The imagination and insight of the individual research worker will give birth to efficient studies and enrich the area. That is the hope with which the present section and the study is concluded.