PREFACE

Teacher occupies a key position in any programme of educational reconstruction. He has to organize and skillfully execute conditions for learning to enable the students under his care to make the maximum utilization of their potentialities. This is not an easy job because teaching-learning process is considered to be one of the most delicate, complex, challenging and significant of all the social processes. So the teacher is expected to skillfully manipulate the learning situation in and outside the class to enable the pupils so make the needed changes in their way of thinking and doing. For this very reason, the teacher training colleges must shoulder the responsibility of giving the student teacher all those experiences which are essential, so that they are able to face teaching-learning situation with courage, patience and confidence in their real world of work after the training is over. This they can do only if the teacher training situations develop over the years a reliable valid and practical inventory of professional experience as a guide to student teachers.

In the present study, the 1st chapter has been devoted to the conceptual framework of the terminology (teacher behaviour and its effectiveness) of the problem.
Its terms used underlying the problem, aims, and objectives, hypothesis and the limitations have been also included in this very chapter.

In second chapter, Back ground and Related Literature, contains the developmental studies with regard to various systems of interaction analysis. This chapter also includes the specific works in science from outside the country along with those studies undertaken relating to the field of teacher behaviour in our country. These studies have been included only because of the fact that the studies done in this field are rare and negligible in science education.

The third chapter has been devoted to the pilot study. In this study the Flanders' Interaction Category System has been used for the analysis of Teacher behaviour of science teachers. Some limitations of this system are also visible in the analysis of teacher's behaviour, specially in science subjects. To overcome this limitation a new tool S.T.B.I. has been developed and its details have been given in the next chapter.

The next, fourth chapter, has concern with the development of a system for analysing the teacher behaviour of science teachers through Interaction Analysis. In this chapter, the investigator had studied and analysed thoroughly the complete 92 systems. The first hand observations about
events or items which took place in the classroom had been collected, classified, fused and restructured for the development of the tool S.T.B.I.

The fifth chapter is 'About the Study'. This chapter gives a complete picture of the methodology, sample, procedure, descriptions of the tools, reliability, validity and handling of data etc.

In the sixth chapter the organization, presentation and analysis of the data had been undertaken. This chapter has been divided into parts; 1st part deals with the application of S.T.B.I. in the Macro-teaching situations and Personality correlation with Teacher Behaviour. In the second part, the S.T.B.I. is used and the observations have been taken in the Micro-teaching situation and it has also used as a feedback technique for the modification of teacher behaviour.

Mathematical structure of the S.T.B.I. had been discussed in the seventh chapter. Here the coefficients of reliability, and validity along with the extracted factors drawn through the factor analysis have been given.

The eighth and the last chapter has been devoted to the main findings, their educational implications and the additional problems for further studies. The chapter-wise references has been given just after the chapter.
The Bibliography and the appendix, which included concerning documents and most of the organized data with reference to observations of the science teachers and their personality scores, have been provided in the end of the thesis.

The present study is an extension of the problem undertaken by the investigator during his M.Ed. under Dr. N. Vaidya, then Reader in Education, R.C.E., Ajmer. The summary of his work appeared in 'Reshaping our school science education' subscribed by National Book Trust, Delhi. I am very much obliged to Prof. Vaidya for suggesting me to tackle this problem at depth later on.

The researcher takes this opportunity to express his heartfelt sense of gratitude to his supervisor, Dr. S.K. Pal, Prof. of Education, Allahabad University, Allahabad, and whose gracious, scholarly guidance, over all, encouraging and sympathetic attitude contributed most significantly towards the present form of the research work.

The investigator is very much indebted to his Principal P. Singh, for his love, encouragement and providing the facilities such as tape recorder, and electronic calculator from time to time.

He also seizes this opportunity to record his indebtedness to Dr. K.K. Vasishtha, Lecturer, R.C.E., Ajmer and Shri R.D. Singh, Lecturer in Education, for their valuable suggestions and encouragement during the conduct
of the study.

He must not forget to acknowledge the assistance rendered by Shri O.P. Sharma, Shri T.S. Sandhu, Shri P. Tandon Mr. Shailendra and Mrs. Meena Sharma in preparation of matrices, going through manuscripts and in elevating his level of aspiration.

Special acknowledgements are due to the teachers, and pupil-teachers who volunteer themselves for the study, to Head, CASE, M.S. University, Baroda, to Heads, Deptt. of Education, R.C.E.'s Ajmer and Bhopal and to Librarian, NIE, NCERT, New Delhi who extended their fullest cooperation for needed facilities. He also wishes to express his indebtedness to learned workers, authors, whose contributions have been freely consulted in this venture.

Brij Kishore Sharma
M.Sc. M.Ed.
Lecturer in Education
M.M.P.G. College
KALAKANKAR (U.P.)