

Teacher Education

A TREND REPORT

R.C. DAS

N.K. JANGIRA

Conceptual Frame

The expansion of pre-service teacher education to meet the needs of unprecedented expansion of education in the post-Independence period and the increased focus on in-service education of teachers on a continuous basis brought in its wake concomitant problems relating to the quality of teacher education in the country. Different Education Commissions (Ministry of Education, 1953; Ministry of Education, 1966), various committees (Ministry of Education, 1963; NCERT, 1966) and the National Council of Teacher Education (NCERT, 1978) have voiced this growing concern. The quality concerns led to research, investigation and experimentation for improving the effectiveness of pre-service and in-service teacher education. The spurt in this activity, in recent years, in this vital area of educational research becomes conspicuous from the fact that the First Survey of Research in Education identified 45 studies during the first three decades and a half of educational research in the country (Buch, 1974). The Second Survey of Research in Education, covering the period 1973-78, identified 63 studies, while the current survey, covering the period 1974-1983, has recorded 116 studies. The studies conducted in the area of teaching and teacher behaviour having direct relevance to teacher education can further swell the quantum of research in this area. These studies have been included in Chapter 15.

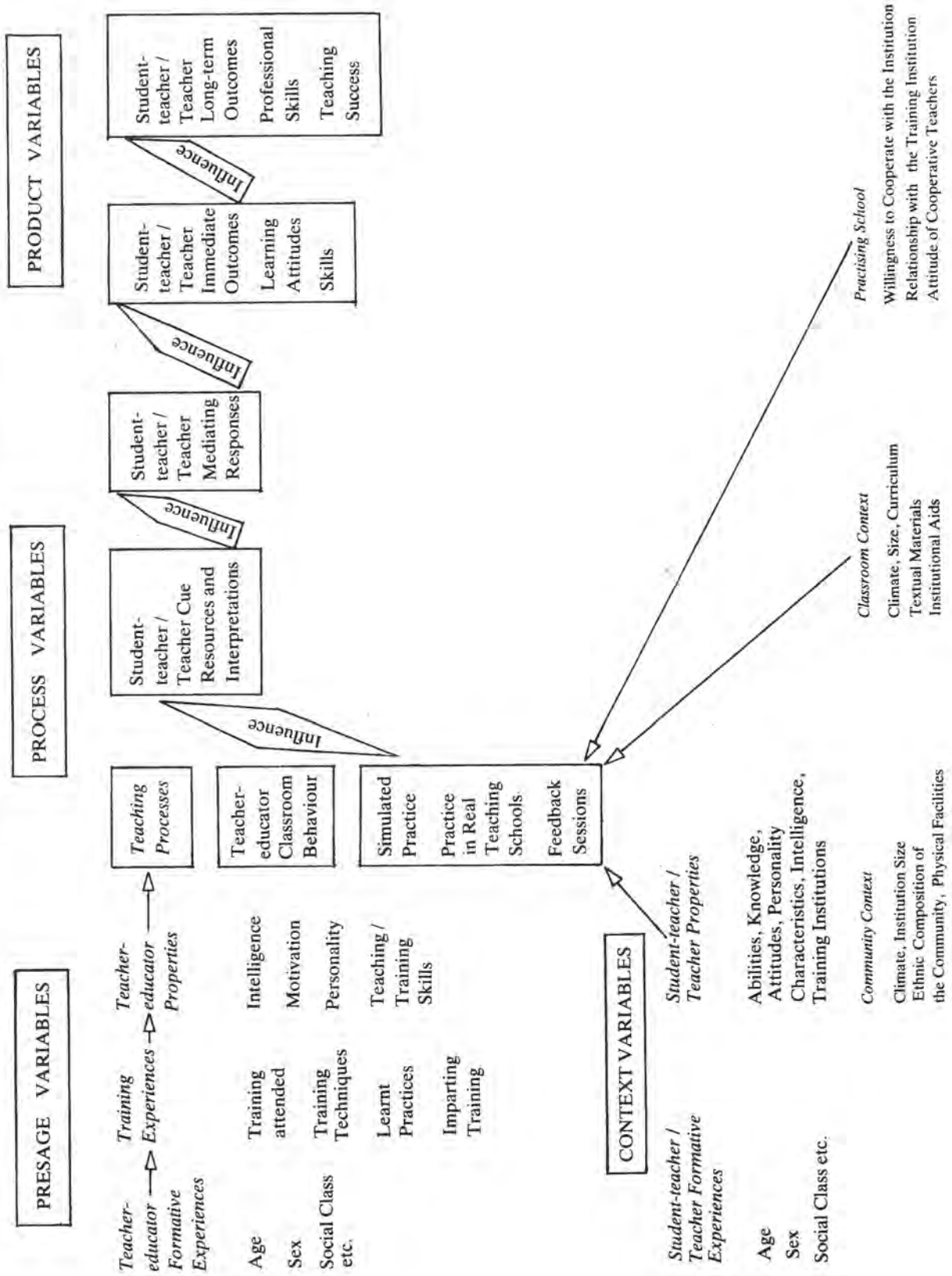
The present review purports to discern trends, identify gaps and visualize future research needs in pre-service and in-service teacher education. There are several ways to organize the trend report. It can be organized around the substantive content areas of teacher educa-

tion like pedagogical theory, student teaching, practicals other than student teaching, and so on. The levels at which teacher education is organized provide another frame of reference. The studies can also be clustered into methodological types — descriptive, developmental, experimental, and the like. Each of these alternatives, as a basis of the conceptual frame, has its strengths and limitations. But keeping in view the objectives of the present trend report mentioned above, it will be advantageous to adopt an eclectic approach.

Systems model involving context-input-process-output components adopted for the trend report in the Second Survey (Mehrotra, 1979) has been modified within the paradigm of teaching research (Dunkin and Biddle, 1974 as improved by Doyle, 1978). Teaching, in this report, has been viewed in the context of teacher education. This paradigm has been preferred because it highlights the process component in operational terms, which has hitherto been neglected in teacher education. This component is the key to the improvement of teacher education. Further, it will be quite helpful in identifying specific research gaps and locating directions for future research. The paradigm has been shown in figure on page 783.

The institutions, including the teacher education institutions or in-service training organizations, provide the context for transacting teacher education curriculum. The *context variables* include the student-teacher (teacher in the case of in-service programmes) characteristics — their formative experiences, academic qualifications, abilities, knowledge, personality traits, intelligence, etc. At the institutional level, the climate obtaining in the teacher training institution, community

A MODEL FOR THE STUDY OF TEACHING IN TEACHER EDUCATION INSTITUTIONS



context and the administrative set-up provide the context. The classroom context in the teacher education institutions includes climate, its size, curriculum and instructional materials. The practising school provides another context set of variables for research. The *presage variables* cover the teacher educator — his formative experiences, education and training experiences, and characteristics like motivation, personality traits, intelligence level, and teaching and training skills. The context and presage variable influences are shown by the arrows linking them to the teaching process in the classroom and supervisory behaviours relating to student teaching which influence student-teachers (teachers in in-service programmes) who learn to use cue resources concerning performance expectations and to prefer certain cues. It influences student-teachers' mediating processes like attending, translating, segmenting, practising, task persistence, active learning time, and student-teacher engagement with the learning task. These three boxes refer to *process variables*. The process lead to immediate student-teacher/teacher outcomes reflected in learning, attitudes and skills. The long-term outcomes include the level of professional skills and teaching success or effectiveness. The variables of research in these categories are termed *product variables*. This provides a conceptual frame based on micro-analysis of the teaching in the context of teacher education institutions. It has included in-service teacher education as well. The researches in teacher education have studied relationships among variables from one or more sets included in this paradigm. In some studies, particularly experimental studies, cause-effect relationships have been the focus of research. The trend report purports to organize the researches in this area within this conceptual frame.

Context Studies

The context studies cover variables relating to student-teachers, teachers' formative experiences and characteristics, on the one hand, and institutional context, classroom context and practising school context, on the other. Instructional facilities for transacting teacher education curriculum also fall in this area. There are some independent studies on context variables relating them to other sets of variables indicated in figure given on page 783. The surveys of teacher education conducted at national and regional levels have also covered some of these variables. The studies covering context variables directly or indirectly have also been referred

to. The subsections within context include institutional classroom context, practising school context and student-teacher characteristics.

Institutional Context-Environment

Four studies have been located in this category. These studies have used institutional environment as variables in the form of organizational climate (Meenakshi, 1979; Gupta, 1982) or social cohesion (Jangira, 1982; Dutt, 1983). Out of these, Meenakshi's (1979) study is descriptive in nature as it purports to identify the organizational climate types obtaining in the colleges of education in Uttar Pradesh. The other studies have gone a step further by way of relating institutional context with product variables in respect of student-teacher achievement in theory (Gupta, 1982); student-teacher achievement in theory and practice, their attitude and adjustment (Jangira, 1982) and student-teacher attitude and adjustment (Dutt, 1983). Further Jangira (1982) attempted prediction of achievement in theory and practice from social cohesion variables. The study reveals that social cohesion variables are better predictors of student-teacher achievement in practice than in theory.

Methodologically, in about 25 per cent of the studies, the samples have been randomly selected. Meenakshi (1979) used non-parametric statistics. Each teacher training institution is reported to have unique climate. Other studies have not provided evidence supporting normality or otherwise of the data, which precludes judgement about the suitability of the statistical methods used. However, the tools used in the studies have a reasonable level of reliability.

Curriculum Context

Teacher education curriculum provides another set of context variables. Sharma (1982) conducted a study of the foundational course for B.Ed. in the different Indian universities. It is an analytical study collecting opinions of teacher-educators and trained teachers through questionnaire and checklist. The study reveals diversity in aims, content areas as well as practical work. The disturbing feature is that the diversity does not emerge from curriculum principles as most of the curricula are characterized by arbitrary decisions regarding the selection of the content. Obviously, the course has little relevance to the needs of secondary schools. Finally, the investigator has suggested a model syllabus for the foundational course for B.Ed. In addition to the exclusive study on teacher education curriculum some references

are also available in surveys like Marker (1975) and Dubey (1981). These surveys mostly point to the inadequacy of the teacher training syllabi and absence of a system of periodic revision.

It is surprising to find that the curriculum which is the core component of teacher education programme has not received the attention of research workers it deserves. Besides status surveys of the teacher education curricula at different stages, it is highly desirable to study its transaction and effectiveness. The focus on uniformity of the syllabi in the universities and rigidity in their implementation have probably kept this kind of research in abeyance. It will be worth while to develop teacher education curriculum models and try them out for their effectiveness, component-wise as well as the total curriculum.

Practising School Context

Only two specific studies relating to the practising schools are available. Rai (1982) compared the problems of teacher training colleges with regard to the practising schools in Uttar Pradesh and Gujarat. The study is based on the responses from 20 principals of colleges of education, 100 teacher-educators, 500 student-teachers, 30 practising school headmasters and 70 teachers. It reveals a wide discrepancy in the perception of colleges of education and the practising schools, the former lamenting the lack of cooperation from the practising schools while the latter blaming the student-teaching for disturbing the school programme and smooth flow of its activities.

The practising school is a vital component for imparting training in practical teaching skills. Studies on the determinants of effective cooperation between teacher training institutions and practising schools are called for. Further process-based research is needed in this set of context variables. Only this type of research will contribute towards improving the student-teaching effectiveness through meaningful interaction between the two sets of institutions.

Context Surveys

Surveys of teacher education conducted from time to time by institutions as well as individuals provide information relating to several context variables like the size of the institutions and facilities in terms of staff, equipment and materials obtaining in the teacher training institutions. The surveys also provide information about the problems of teacher education and teachers in the

case of in-service teacher education besides providing information regarding the different context variables. The surveys provide useful data for planning teacher education, both pre-service and in-service. Singh (1982) in the Third National Survey of Secondary Teacher Education in India uses the 1971 data base which shows a lag of a decade in the collection and publication of the data. Sharma (1982), surveying the progress and problems of teacher education in India outlining the inadequacies of pre-service teacher education, builds a case for a continuous in-service teacher education programme. Gupta (1980) surveys in-service education of teacher educators in colleges of education. These three national surveys are accompanied by the surveys of teacher education at the State level (Sharma, 1982, for Bihar; Pathak, 1979, for Eastern Uttar Pradesh; Marker, 1975, for Maharashtra; Dube, 1981, a comparative study of Madhya Pradesh and Maharashtra; Rao, 1981, for the training of teachers of the blind; Goyal, 1979, for problems bearing on teacher education in the context of 10+2 pattern). All these surveys have painted a dismal picture of teacher education so far as its qualitative aspects are concerned. Dearth of adequately trained staff and absence of adequate facilities are the predominant findings. The reasons can be traced in Goyal's (1981) study which surveyed reasons for non-enforcement of conditions of affiliation laid down by different universities, which is responsible for low standards in teacher education. Goyal (1982) attempted to develop a model for forecasting teacher manpower requirements through a study of the components causing teacher demand. The model is useful for planning teacher education facilities.

Another set of surveys refer to in-service teachers — their characteristics and problems, which provide context for organizing in-service education of teachers. Buch (1978) surveyed the status of teachers based on the Third All India Educational Survey. The survey revealed that only 13.68 per cent of the primary school teachers, 20.18 per cent of the middle school teachers, 28.76 per cent of the secondary school teachers had participated in some kind of in-service education programme during the two years preceding the survey. It reveals the magnitude of the task to be accomplished in terms of an in-service education programme in the country. Sharma (1982), tracing the growth and development of in-service education for the secondary school teachers in the State of Bihar, discovered a declining trend in the in-service education programme for the secondary teachers after the transfer of Extension Services Centres to the States. Lakdawala (1977) revealed that the women teachers working in the secondary schools of Greater

Bombay, though conscious of the need to grow professionally, did not avail themselves of the facilities because of shortage of time and lack of incentives. Gupta (1978) surveyed the status of secondary school teachers of Uttar Pradesh, Desai (1981) and Muddu (1978) surveyed the problems of the teachers teaching the Marathi language and biological sciences, respectively. In both the cases lack of facilities have emerged as disincentives in teaching. Thakur (1978) surveyed the working conditions of married women teachers in Assam while Mathur (1981) surveyed the mobility pattern of women teachers working in the higher secondary schools of Delhi in relation to their professional commitments. The study reveals a positive relationship between mobility and professional commitments. Many of the surveys referred to above have mentioned the sample but do not provide the number of institutions approached for collecting information and the number of institutions which actually supplied information. This does not allow the consumer the benefit of the information likely to influence the inferences made in the studies. Qualitative surveys of teacher education have yet to emerge. Moreover, comprehensive surveys at national and regional levels should be supplemented by micro surveys both in terms of geographical area as well as specific aspects of teacher education.

Context: Student-teacher/Teacher Characteristics

In the context variables, student-teacher characteristics and their formative experience constitute a vital set of context variables. In the case of in-service teacher education, teacher characteristics constitute the input variables. Thirty-five studies have been identified in this area, ten relating to student-teacher characteristics and twenty-five relating to teacher characteristics. No study is available for student-teachers in the elementary teacher training institutions. Out of the twenty-five studies relating to in-service teachers, only one study has been conducted on primary school teachers; six studies are related to college teachers (including teachers in agricultural institutions and polytechnics); the remaining eighteen are related to secondary school teachers.

The studies in student-teacher characteristics have covered a number of cognitive and non-cognitive variables like personality characteristics (Raina, 1974; Sansanwal and Jarial, 1979; and Raina, 1981); attitude towards teaching (Ahluwalia, 1976; Raina, 1981); self-concept (Mani and Gonsalves, 1977); motivational factors (Aggarwal, 1980); social maturity (Vora, 1980); creativity (Sansanwal, and Jarial, 1979); and awareness and know-

ledge of recent developments in education (Singh, 1981). The studies on teacher characteristics have covered a variety of variables like personality characteristics (Kumar, 1979; Chandra, 1976; Porwal, 1980; Mutha, 1980; and Sharma, 1981); attitudes and values (Koul, 1974; Dutta, 1964; Saraswat, 1976; Mishra, 1977; Gupta, 1979; Goyal, 1980; Bhandarkar, 1980; Srivastava, 1982 and Jaleel and Pillay, 1979); job satisfaction (Kolte, 1978; Goyal, 1980 and Porwal, 1980); innovativeness (Patel, 1979; Gulati, 1980 and Kumar, 1979) and socio-economic background (Job, 1976; Srivastava, 1979; Wadhawan, 1980; and Panjwani, 1982).

Besides the conspicuous absence of studies on student-teacher/teacher characteristics in elementary teacher training institutions, most of the studies have covered non-cognitive variables while a couple of them have studied cognitive variables and that too in a very limited way. The studies are, by and large, correlational. Koul's (1974) study is a factorial study.

Content Product Studies

In this set of studies teacher characteristics have been used as presage variables while the product variables refer to teaching effectiveness. These studies are difficult to interpret because of the wide variation in the definition of product variables. For example, teaching success has been used as a product variable in some studies (Singh, 1978; Rao, 1981; Mann, 1980). Teaching efficiency as product variable has been used by Chander (1976) and Srivastava (1980). Some studies have used teaching effectiveness (Arora, 1976; Gupta 1981). Gupta (1982) has used output variables in terms of student-teacher performance in theory and practice (Chander, 1976; GCPI, 1981). The definition of teaching efficiency and teaching effectiveness or teaching success appears to be governed by the tools used by the investigator, which are not identical. The extent of variation being not known, it is difficult to draw inferences from the findings for use. In the case of student-teachers' performance, however, their marks in theory and practice have been taken. The analysis does not show whether the raw scores were used for statistical analysis or whether they were converted into standard scores. The studies are mostly correlational. There is need for studies conceptualizing variables having standard operational definitions so that it is possible to compare the findings for drawing meaningful conclusions.

Process-Product Studies

Process-product studies in teacher education consti-

tute the transaction of theory courses as well as the student teaching programme. These studies have used systematic observation of the classroom transaction or have well operationalised treatment under established innovative practices like microteaching, classroom behaviour training, modular approach, etc. The product variables comprise the student-teacher's attitude, teaching efficiency, general teaching competence and teaching effectiveness. These studies can be broadly classified into two sub-categories. The first category covers the classroom transaction of general nature while the second category covers basically the studies on microteaching or application of microteaching for skill development. Eleven studies fall in the first category while the remaining 15 in the second category.

Most of the studies in the first category are impact studies. For example, V.S. Sharma, Verma (1979) and Ahluwalia (1977) have attempted to study the effectiveness of the teacher training programme, particularly the process variables in relation to the professional attitude of student-teachers and indirectness. Sohoni and others (1977) confined their study to teaching practice as the independent variable and teacher effectiveness based on rating scale as the dependent variable. Dholakia (1980) focussed on the effect of systematic observation based feedback using Cicirelli's Category System on the classroom behaviour of student-teachers. A couple of studies are foundational in character as they provide data for designing training situations (Jangira *et al.*, 1981; Balachandran, 1981).

Studies on Microteaching

Research on microteaching which made a beginning in the latter part of the seventies continued during the period under report. The studies included in the Second Survey mostly aimed at investigating the effectiveness of microteaching *vis-a-vis* the conventional student-teaching practices and interaction analysis. Some studies, however, were carried out on variations in microteaching components. The studies included in this survey have gone a step forward in the sense that they aim at refining microteaching components and improving its efficiency further. Das *et al.* (1982) and Singh (1982) purported to study the effectiveness of different strategies of integration of teaching skills as intervention training for facilitating transfer of microteaching gains. Jangira *et al.* (1980), and Jangira, Singh and Mattoo (1981) studied the effectiveness of microteaching as a means of improving teaching competence of in-service teachers. Jangira and Dhondiyal (1981a) developed CBT for improving

classroom questioning behaviour of teachers. Paintal (1979-80) and Kaur (1980) developed Self-Instructional courses for improving the skills of questioning of teachers. Paintal (1979-80) relied on live demonstrations, lectures and printed material. Kaur (1980) tried self-instructional audio-cassettes for developing teaching skills. Yadav's (1983) is a step forward because it not only studied the effect of training in the classroom questioning behaviour on teaching competence of student-teachers but also studied its effect on pupil achievement which is the ultimate criterion of teacher effectiveness. Mukhopadhyay (1981) compared the effectiveness of microteaching and modular approach and found both to be equally effective. Patel (1978), Ray (1978), Paikarav (1981) and GCPI (1977) carried out research on different components of microteaching.

Practically all the studies on microteaching are experimental employing pretest-posttest control group design. The studies with in-service teachers have followed single group pretest-posttest design. One of these studies, Jangira, Singh and Mattoo (1981), used Teaching Assessment Battery (TAB) comprising observer assessment, self-assessment by the teacher and perceptions of the pupils. Most of these studies have applied t-test for testing the significance of the means without providing specific information about the assumption of normality of data even with a small sample of 10 to 15 in the groups. Non-parametric tests could have been used in case the assumptions were not fulfilled.

The period of growth of microteaching research is linked to its increased adoption in teacher training institutions. However, research in microteaching is directed at the secondary teacher education level. Considering the number of elementary teacher training institutions and the number of teachers involved in the context of universalization of elementary education, it is highly desirable that a similar effort be made at the elementary teacher education level also.

Research Gaps and Future Orientation

Research in teacher education does not have a long past. It is only for about last two and half decades that research in this area began to be undertaken. Although the quantum of research in teacher education is increasing progressively, it leaves much to be desired in terms of the range of teacher education variables and quality. Analysing the researches conducted so far within the frame of reference provided in the paradigm discussed earlier, the gaps become quite conspicuous. This section purports to highlight some of these gaps and

charter future orientation.

There is no single study available on the evaluation of alternative models of teacher education as a whole in terms of their effectiveness reflected in teacher effectiveness in the institutions where they secure teaching positions after the completion of their training. Without this, an organic model of teacher education has to remain a dream reality. For example, two models of teacher education, one comprising academic courses followed by professional courses and the other envisaging integrated academic and professional courses, have been used. There is no research available about the effectiveness of the teachers emerging from the two models. Other alternative models of teacher education could also have been studied for their effectiveness. Similarly, the approach to the transaction of the teacher education curriculum (Competence-based Teacher Education, Performance-based Teacher Education, Modular Approach, etc.) needs to be researched. This whole area has remained untouched by the researchers in teacher education. Probably, the uniformity of the training patterns and the rigidity of the system for evolving and implementing teacher education programmes, the lack of facilities for trying out alternative programmes and the absence of organizational support are responsible for this situation. With autonomous colleges of education coming up, this type of research should be encouraged in the years to come for evolving teacher education for the future.

Studies have been made in the institutional context but no studies are available in variables related to the community context as well as the classroom context in teacher education. In the area of research on teaching and teacher behaviour reviewed earlier in this survey, a number of studies are available where the classroom climate/environment has been studied, but in the case of teacher education institutions this area has not received adequate attention. Immediate studies are needed not only in teacher educator's classroom behaviour for covering theory courses but their supervisory behaviour during practice teaching as well. The studies should be in relation to presage variables as well as product variables.

There is very little research available in the area of curriculum development and transaction in teacher education. The curriculum is revised mostly on an ad hoc basis in the absence of research. Curriculum areas are deleted and added. All this happens without any research evidence about the desirability or otherwise of the curriculum change. It is desirable to undertake research on curriculum development in teacher education, its transaction and evaluation to provide a research base.

Similarly, more research on the application of educational technology to the transaction of teacher education is called for.

There are some process-product studies. The results are difficult to compare as the Operational definitions of the variables are as many as the number of studies. It is only in the case of research on microteaching that teaching competence as a product has been consistently used in the same way over a number of studies. Most of these studies are related to student teaching programme. The instability of the results indicates that there are some variables which are either not accounted for or they have been inadequately conceived. For example, the process-product studies provide for micro-analysis of the process of student-teacher perception of the learning task. Reaching their cue resources and interpretation and student-teacher mediating responses are conspicuously missing. Unless process-product research in teacher education accounts for these variables at the microlevel, it may not be possible to reach dependable consistent results.

There is yet another gap in process-product research in teacher education. The product variables cover student-teachers' immediate outcomes like achievement in theory, attitude and skills. There is no study regarding the follow-up of the student-teachers when they assume teaching positions after completing their training. The long-term outcomes relate to the transfer of training competence in the field and achieving success in the teaching profession. Only a couple of studies have tried to cover this aspect in a limited way. Jangira (1979) reported a six-month follow-up of the student-teachers after their assuming teaching positions and demonstrated the sustenance of training effects. Jangira *et al.* (1980) conducted an experiment with in-service teachers and carried out a study of the sustenance of training effects. It is desirable to study the transfer of training effects and their sustenance through follow-up research and relating it to pupil achievement as this is the only way to validate teacher education models.

Researches relating to the modalities and practices in teacher education are also very limited in their range. Studies are available in the use of interaction analysis and microteaching as means of modifying teacher behaviour. Simulation training exercises and teaching model based approaches are still awaiting applied researches in teacher education in the country. Similarly, in the case of in-service teacher education little research is available regarding the use of distance learning techniques apart from evaluation studies conducted in the NCERT for the SITE, INSAT and Radio Utilization

Project. As these modalities are being increasingly used researches will be fruitful for providing an empirical base for their effective utilization.

The research on teacher education is sporadic when viewed within the framework of the paradigm. The studies are isolated without any linkages. Moreover, most of the studies are of short term lacking continuity of research in a particular area except in the field of microteaching where there is continuity of research as well as better coverage in terms of the range of the variables studied for building up a theory. It is essential that the research is based on a sound conceptual frame. Within this conceptual frame a number of studies can be conceived, designed and implemented. Researches in the alternative models of teacher education require continuous studies over several years. This type of research can be planned and funded by the agencies like the NCERT, the UGC, the ICSSR, etc. These studies can be farmed out to different agencies like the universities, colleges of education and individual researchers.

Another vital area requiring immediate attention refers to design and analysis of studies. There appears to be stereotyping in respect of the design and analysis of the studies in teacher education. Correlational and experimental pretest-posttest control group designs are predominantly used. Laboratory experiments, multivariate designs and quasi-experimental designs (Campbell and Stanley, 1968) with reconciliation of the desirability of the control in respect of internal and external validity and feasibility of implementation may be

used. Besides, indepth studies of teacher education institutions, training situations and teachers at the microlevel are essential to discover new variables for improving effectiveness of teacher trainees and for explaining the results emerging from macro analysis of the studies.

Conclusion

The trend towards quantitative growth of research in teacher education over the last decade is a healthy augury as it shows interest of the research workers in this area of educational research. Studies have appeared in context variables relating to institution, student-teacher characteristics, and curriculum; process-product variables particularly student teaching where research on microteaching has dominated the scene during the period under report. There are areas like curriculum development, practising schools, cue resources of the student-teachers, their mediating responses and cue utilization for the acquisition of learning which still need to be researched. Educational technology as a means of improving effectiveness of teacher education is an area which requires immediate research. Continuous research following up the training gains to study transfer of training and its sustenance will provide useful research-based guidelines for designing teacher education programmes. Programmatic research within a viable conceptual frame accompanied by functional design and analysis of research will go a long way in improving research on teacher education in the times to come.

ABSTRACTS: 1122 — 1242

- 1122.** AGGARWAL, Y.P., *Motivational Factors in the Choice of Teaching as a Profession and Its Relationship with Some Other Variables*, Dept. of Edu., Kur. U., 1980 (Kur. U. - financed)

The major objective of the study was to identify the motivational factors in B.Ed. trainees' choice of teaching as a profession. The sample consisted of 241 B.Ed. trainees of both sexes belonging to rural as well as urban areas. They were selected randomly from five colleges of education in Haryana. They were administered an attitude scale constructed by the investigator and the Aaron Socio-Economic Status Scale. In addition to it, information regarding their educational background, future plan, strength of motivation, etc., was collected by administering a questionnaire prepared by the investigator.

The major findings of the study were: (i) Although there were inter group differences in the factors that motivated the students to join teaching, five factors emerged as most important. In order of priority, these were: desire to continue education, possibility of doing good to the country, fondness of teaching, security of job, and parents' wishfulfillment. (ii) Teaching had been consistently a very popular aspiration from high school through college education. (iii) A majority of all the groups had no relative in the teaching profession, however, teacher spouse influenced the urban girls. (iv) A large majority of the B.Ed. trainees wanted to take up teaching but very few wanted to start their own schools. (v) A large majority of the B.Ed. trainees belonged to high socio-economic group. (vi) There was no significant difference in attitude towards the teaching of high, middle and low socio-economic status groups.

- 1123.** AGRAWAL, M.P., *Measurement and Competence of Teachers of Primary Schools (M.P.)*, Ph.D. Edu., Sag. U., 1969

The major objectives of the study were: (i) to develop and validate a tool to measure the competence of teachers on process criteria and measure their teaching competence, (ii) to assess the classroom teaching competence of teachers with reference to product criteria, (iii) to measure intelligence, teaching abilities and subject knowledge of teachers as presage criteria, (iv) to de-

velop a booklet dealing comprehensively with the measurement of on-the-job efficiency of teachers, and (v) to identify the causes of incompetence of teachers and suggest means to improve competence.

The study was conducted on 770 teachers of Madhya Pradesh. To measure the teaching competence, a Teaching Competence Scale was developed on competencies related to classroom teaching, co-curricular activities and school as a social group. A 100-item test was developed after scrutinization, tryout and item analyses. The test was prepared in two parts — Part I comprised classroom teaching, and Part II other dimensions of the teachers' job. The reliability coefficients for Part I and Part II were 0.747 and 0.707, respectively. The validity coefficients were 0.889 and 0.829 for Parts I and II, respectively. Four hundred and thirty-four administrators, inspectors and headmasters and 284 teachers were contacted to evaluate the competence of teachers.

The study revealed: (i) More than 53 per cent teachers were not intelligent enough to be teachers, and intelligence was significantly and positively related to subject knowledge ($r = 0.42$). (ii) Of the primary teachers, 52.6 per cent did not like the teaching profession and their attitude was significantly related to the competencies of classroom teaching and of conducting extra-classroom activities ($r=0.422$ and $r=0.466$, respectively). (iii) About 70 per cent teachers passed in the third division and about 50 per cent did not possess adequate knowledge of the subject to be able to teach competently. (iv) In the classroom teaching, about 52 per cent teachers were below average whereas 47.35 per cent were weak in the competence of organizing co-curricular activities, school programmes and other activities of the school. (v) The main problems of teachers listed were low salary, irregularity in increments, salary incommensurate with qualifications, transfers, etc. (vi) The problems faced in schools were multiple class teaching, attendance and the number of students in a class, poor accommodation, non-availability of teaching aids, teacher-parent relationship, supervision and relation between the school and the community. (vii) According to the evaluation the administrators, inspectors and headmasters considered 40 per cent teachers as competent, and the teachers considered 42 per cent of them as competent.

- 1124.** ARORA, K., *Differences between Effective and Ineffective Teachers*, Ph.D. Edu., JMI, 1976

The main objective of the study was to find out the characteristics differentiating effective and ineffective

teachers. Other objective was to study (i) their educational background, (ii) their occupational background, (iii) their job motivation, (iv) their present work, workload and professional growth, (v) their job satisfaction, (vi) their socio-economic and family background, (vii) their attitudes, and (viii) their opinion about certain current issues related to school education.

The study was conducted in thirty higher secondary schools of Delhi, including equal number of boys' and girls' schools. Among the 160 teachers selected for the study, there were equal number of effective and ineffective male and female teachers. The sample was identified with the help of the Teachers' Characteristics Description Form (TCDF) and the Education Proforma (EP) which were developed by the investigator. In the TCDF, the characteristics associated with effective teachers were listed and the reactions of twenty of the higher secondary schools principals and an equal number of teachers, education officers, teacher educators and researchers of the NIE were obtained to know whether they were indispensable, desirable or not important. The EP contained all the characteristics considered desirable and indispensable and the principal was asked to indicate which of the characteristics were found in each of the teachers.

The findings of the study were: (i) The age and the tenure of service were non-differentiating characteristics. (ii) A greater number of ineffective teachers passed examinations while in service. (iii) The educational qualifications and divisions obtained and continuity of studies in one phase did not differentiate. (iv) For job motivation, the stage at which the decision to join the profession was taken, the considerations which influenced the choice of profession and the decision to join the profession were the differentiating characteristics. (v) Of the aspects under the present work, the working conditions and others, the distance between the school and home, the time spent on daily travelling, the additional non-teaching duties, the nature and satisfaction with them, utilization of free periods, satisfaction with syllabus and incentives for good work were the differentiating characteristics. (vi) The teachers did not differ in terms of the length of teaching experience, satisfaction with the allotment of teaching subjects, textbooks and the mode of transport used for travelling to school. (vii) Differentiating characteristics with regard to professional growth and desire to attend in-service programmes could be observed while there was no difference regarding the study of professional books and literary pur-

suits. (viii) Differentiating characteristics of job satisfaction were general satisfaction as well as the degree of satisfaction with work and causes of dissatisfaction. Regarding the views on improvement in school and making teachers' work attractive there was little difference. (ix) On personal and family circumstances, specifically marital status, financial conditions and leisure-time activity, there was no difference. (x) The groups of effective and ineffective teachers differed on the attitude to teaching, teacher-pupil relationship, discipline and punishment, teaching aids, homework, and curriculum. (xi) Views varied as regards improvements needed in the educational system, enhancement of prestige in society, existing teacher training, maintenance of good relationship among the members of the school staff, better teacher-pupil relationship, and discipline in the school while both the groups agreed that teachers should have better salaries.

1125. BALACHANDRAN, E.S., *Teaching Effectiveness and Student Evaluation of Teaching*, Ph.D. Edu., Madras U., 1981

The main objectives of the study were: (i) to construct a rating scale to evaluate teaching effectiveness of college teachers by their students, and (ii) to find out the feedback effect of student evaluation on teachers in terms of their teaching effectiveness.

The sample consisted of the teachers who taught at the under graduate level in the colleges of Madras University area offering general academic courses and the students who took these courses. A tool to evaluate college teachers was constructed in the first phase of the study. The teacher's characteristics which contributed to effective teaching were pooled from a sample of college students and of college teachers and from related literature. The pooled items were screened and simple and discrete characteristics which were manipulable by teachers and which were relevant to all subject teachers were listed. These characteristics were judged by a sample of students under five important categories; out of the ninety-one characteristics, thirty-five were selected as the important ones. These characteristics were phased as items of a 5-point numerical type of rating scale. The second phase of the study was an experimental one in which sixty-one teachers, both men and women, teaching English or economics, were selected from eleven colleges in Madras. The teachers were randomly assigned to the experimental or the control

group. Each of the teachers was rated by any one class of their students whom they had also taught in the previous semester. The teachers in the experimental group alone were given the evaluative feedback based on the student's ratings within two or three days. The teachers from both the groups were rated a second time after an interval of five to six weeks. The gain scores for the two groups were compared to determine the feedback effect of students' evaluation. The study also included a survey of teaching effectiveness of college teachers teaching different subjects using the constructed rating scale. A sample of teachers made self-ratings using the same rating scale. The general survey of ratings was factor analysed using Principal Axis solution to identify the dimensions of effective teaching and to establish reliability and validity of the items.

The findings of the study were: (i) The evaluative feedback based on students' rating helped teachers significantly improve their teaching effectiveness irrespective of sex or subject of teachers. (ii) Students' rating and self-rating of teaching effectiveness were positively and significantly related but the self-rating was significantly higher than the students' rating. (iii) The factors of teaching effectiveness identified were: subject mastery and intellectual kindling, responsiveness, integrity and communicating ability, commitment to teaching, impartiality, motivating, concern for the student's progress and informal academic help. (iv) The lowest performance of teachers, on an average, was with respect to encouraging discussion in the class and the best was with respect to punctuality. (v) The teachers in the Madras University area, in general, had a favourable attitude towards students' evaluation of teaching.

1126. BHANDARKAR, B.G., *A Study on Polytechnic Teachers' Attitude Towards Teaching Profession and Its Correlates*, Government Polytechnic, Jalgaon, 1980 (TTTI, Bhopal-sponsored)

The objectives of the study were: (i) to develop a scale for measuring teachers' attitudes towards the teaching profession along with stanine norms, (ii) to measure polytechnic teachers' attitude towards the teaching profession, and (iii) to examine the relationship of attitude towards the teaching profession with teachers' age, qualification, training, job mobility and family problems.

A Thurstone-type scale was developed. The teaching profession was subdivided into six components, viz., contents, teaching, training, students, colleagues, and institute and administration. In all, 106 items were

drafted representing very favourable, somewhat favourable, neutral, somewhat unfavourable and most unfavourable opinions about each of the selected six areas. On scrutiny by a group of experts fifty items were retained and recorded on cards. They were subjected to classification into eleven categories from most favourable to most unfavourable by professionals trained in psychometry. The median value for each item was calculated. The final form containing forty-six items was administered on eighty-nine teachers and split-half reliability was found to be 0.61, which was significant. The next phase was conducted on 400 teachers of eighteen polytechnics of Maharashtra, 137 from urban areas, 249 from semi-urban areas and 14 from rural areas. The data on age, qualification and other variables were collected on an information blank. On the basis of the scores on the attitude scale, stanine norms were developed for the attitudes, separate norms were developed for each of the components of the attitude scale. Computations were made to examine the differences in attitude among the teachers from urban, semi-urban and rural areas. In order to estimate the relationship with other variables, product moment and tetrachoric correlations were calculated.

The study revealed: (i) The mean attitude rating ranged between 3.77 and 9.50. (ii) Compared to the norm developed on the state-level sample, the teachers of both the rural polytechnics had unfavourable attitude; in the semi-urban area the teachers of six polytechnics had neutral attitude, the teachers of four polytechnics had unfavourable and of one favourable attitude; in the case of urban polytechnics the teachers of three polytechnics were neutral, of one unfavourable and of one favourable. (iii) On each of the sub-dimensions the mean attitude ratings were the highest for the urban teachers, followed by the semi-urban and the rural teachers although the differences were not significant. (iv) The attitude towards the teaching profession was not significantly related to the qualifications of the teachers. (v) There was a significant and positive relationship between the age of the teachers and their attitude towards the teaching profession. (vi) The trained teachers' mean attitude score was significantly higher than the mean attitude score of the untrained teachers. (vii) The job mobility and family problems were not significantly related to teachers' attitude towards the teaching profession.

1127. BHATNAGAR, M., *A Study of Organizational*

Climate of the Teacher Training Institutions of Uttar Pradesh and Its Relationship with Their Effectiveness, Ph.D. Edu., Mee. U., 1979

The objectives of the investigation were: (i) to evaluate the organizational climates of various types of teacher training institutions existing in Uttar Pradesh focussing on studying the differential characteristics of the organizational climates, (ii) to study how the organizational climate is related to the institution's effectiveness, and (iii) to identify the most characteristic environmental features, key questions and problems which students were most cognizant of and most in agreement with, bringing out the unique and different types of environmental problems that each type of teacher training institution presented to the students.

The hypotheses examined were: (i) The organizational climate of a government training college was different from that of other training colleges. (ii) The organizational climate of the institutions located in the rural areas of the State was different from that of the institutions located in the urban areas. (iii) The organizational climate of large institutions having more than 100 students was different from that of the institutions having 100 or less number of students. (iv) The organizational climate of the men's training colleges was different from that of women's training colleges. (v) The organizational climate of the university departments of education was different from that of the affiliated college departments. (vi) The organizational climate of a teacher training institution affected its effectiveness defined in terms of its students' performance in theory examinations. (vii) Each type of teacher training institution had its own unique characteristics of the organizational climate. The study was conducted in fifteen teacher education institutions drawn randomly out of the forty institutions of U.P. with 1,000 students. The institutions were further grouped as rural-urban, large-small, government-private, boys-girls. Organizational climate was measured by an Organizational Climate Questionnaire (OCQ) prepared by the researcher. Kolmogorov-Smirnov test of significance was used to test the hypotheses.

The findings of the investigation were: (i) The organizational climates of teacher training institutions in U.P. were characterized by high level of hindrance factor authoritarianism, high academic emphasis, low level of discipline and control and lack of facilities. The overall picture emerging was not impressive and good. (ii) The colleges differed among themselves significantly with regard to each dimension of OCQ. (iii) The stereotype of non-government teacher training college's organiza-

tional climate indicated high hindrance, high democracy and freedom and high lack of facilities. The stereotype of organizational climate of government teacher training colleges, on the other hand, meant high social support, high authoritarianism, high trust, high academic emphasis, and high discipline and control. It was proved that significant differences existed between them on all the nine dimensions of OCQ. (iv) In large institutions, the climate was dominated by high authoritarianism, high trust, high academic emphasis and higher degree of discipline and control as compared to small institutions. On the other hand, small institutions' climate was characterized by high hindrance, high democracy and freedom and high lack of facilities. (v) The rural institutions had high level of discipline and control and high academic emphasis as compared to the urban institutions. On the other hand, the urban institutions were high on democracy and freedom and lack of facilities. (vi) The men's training colleges had better social support, greater trust, more academic emphasis and better discipline and control than the women's training colleges. (vii) The trust and academic emphasis were more predominant in the climate of university departments of education than in the climate of the college departments. But, on the whole, the climates of the two groups of teacher training colleges were similar. (viii) The organizational climate affected the effectiveness of the institution. (ix) Each teacher training institution had a unique kind of climate.

1128. BUCH, M.B. and SINGH, S., *Third All India Education Survey: Teachers*, NCERT, New Delhi, 1978

The study was a census-type survey of all school teachers in the country. The main objective of the survey was to collect comprehensive information about primary, middle and secondary school teachers focussing on five points, namely, qualifications and experience, professional training, participation in professional growth activities, tenure of appointment and mobility of teachers from the teaching profession.

The study was carried out as a part of the Third All India Education Survey. Relevant data were collected through two schedules, viz., school information blank and teacher information blank. Wherever found appropriate, data were analysed with respect to rural-urban categories and also in terms of management as government, local bodies and private.

The major findings of the study were: (i) There were

26,38,777 teachers working in all stages of school in the country. Of these, 47.38 per cent teachers taught at the primary stage, 26.02 per cent at the middle stage, 14.4 per cent at the secondary stage and 12.2 per cent at the higher secondary stage. (ii) Out of the total number of teachers in the country, female teachers constituted only 25.24 per cent. The proportion was still lower when teachers working only in rural areas were considered. (iii) There were 1,86,998 teachers belonging to the scheduled castes, their percentage being 7.23. The number of teachers belonging to the scheduled tribes was 87,069 forming 3.36 per cent. While these figures were slightly higher (9.48 per cent and 4.44 per cent, respectively) for the primary stage, they were as low as 1.85 per cent and 0.74 per cent, respectively, at the higher secondary stage. (iv) Management-wise analysis revealed that 74.94 per cent teachers were employed in schools managed by government and local bodies and 25.05 per cent in schools managed by private agencies. (v) Of the total teaching force, part-time teachers constituted 0.94 per cent and teachers having a permanent tenure constituted 71.83 per cent. (vi) Of the total number of teachers at primary, middle and secondary stages about 85 per cent were trained. However, at the higher secondary stage this figure was only 76.33 per cent. (vii) The percentage of the teachers who had migrated from the teaching profession to other professions was only 0.95. (viii) The percentage of the teachers who had participated in in-service education programmes during the previous two years was 13.68, 20.18, 28.76 and 37.09, respectively, for primary, middle, secondary and higher secondary stages.

1129. CHANDEL, B.S., *Teacher Appraisal by Students and Self — a Case Study*, Polytechnic, Harda, 1981 (TTTI, Bhopal-sponsored)

The objectives of the project were: (i) to study the feasibility of appraisal of the classroom teaching by students, (ii) to compare the student appraisal with the self-appraisal, and (iii) to compare the appraisal by two groups of students.

In the present study the appraisal was conducted on the investigator himself. On one occasion the appraisal was done by twenty-five students of one class, second time it was done by twenty-six students of another class. The investigator appraised himself for one of his usual classes. In this study only the classroom teaching was appraised. An appraisal instrument developed by TTTI, Bhopal, with fifteen items was used for the purpose. The

mean scores for each item for each class and self were worked out separately. The mean of the whole test was also calculated separately for all the three appraisers. Item-wise correlations were found out between the two student groups, each student group and self, separately. The comparative profile of the teacher was also drawn on the basis of item scores.

The results of the project were: (i) The mean scores on the whole test were 44.4 for the students of Group A, 48.7 for the students of Group B and 55 for self. (ii) In five of the fifteen items pertaining to the statement of aims, effectiveness in drawing attention, explaining, systematic coverage of the subject and information about the next topic the student rating and the self rating matched. (iii) In three items — proper speed of lecture, students' perception of freedom to ask questions and students' learning occurring in the class — the teacher underrated himself, and the two groups of students provided consistent rating. (iv) In the rest of the items related to the selection of content in sequence, the choice of teaching aids, the use of chalkboard examples, asking questions, repetition of the main points at the end of the lesson and whether the lecture was interesting, the teacher's self-rating was more than the student rating. (v) The coefficient of correlation between the ratings of the two student groups was significant. (vi) The relationship between self-rating and student rating in both the cases was not significant.

1130. CHANDER, R., *Relationship of Attainments in Theory Subjects in B.Ed. Course with Attitude as a Teacher and Teaching Efficiency*, Ph.D. Edu., Kur. U., 1976

The study attempted to investigate the relationship between the attainments in a training course with the teaching efficiency in the classroom and attitude as a teacher.

A stratified cluster type of sample comprising 500 trainees was selected from the training colleges of Haryana. The colleges were the strata and the classes the clusters. The tools used were the Minnesota Teacher Attitude Inventory (MTAI), an achievement test based on the theory papers — principles of education, techniques of education, educational psychology, modern Indian education and its problems and school organization — and the marks in Skills in Teaching Examination of the Panjab University held in May 1973. Those getting 62 per cent or more were put in the upper group whereas those getting 58 per cent or less were put in the lower

group. Product moment correlation, biserial correlation and chi-square test were used as statistical techniques for data analysis and interpretation. The data were further subjected to factor analysis using the centroid method. Attitude towards pupils and teaching efficiency was taken as dependent variables.

The major findings of the study were: (i) Factor analysis indicated three different factors — Factor A, Factor B, and Factor C. (ii) Attitude and teaching efficiency had loadings on Factor A alone and only two other variables, techniques of education and educational psychology, had appreciable loadings on it. Factor A had only small correlations with Factor B and Factor C. Therefore, the variables of attitude and teaching efficiency had little to do with the existing theory courses other than those in educational techniques and psychology. (iii) Factor B bound together principles of education and school organization. The techniques of education had the highest loading on this factor while it had rather a poor loading on Factor A. Hence Factor B might be a factor having little to do with the practices of education but more with the principles that determine the techniques and organization of education. (iv) Factor C seemed to be a more general factor of theoretical aptitude, inclusive of memorization, and was apparently more general than Factor B because it encompassed more theory papers and appeared to be more theoretically biased.

1131. CHANDRA, D., *A Study of Emotive Aspects of Work (a Perception of College Teachers) Ph.D.* Edu., Agra U., 1976

The objective of the study was to make a comparison of the perceptions of effective and ineffective teachers on some emotive aspects of work. The hypotheses formulated were: (i) There was no significant difference in the factor structures emerging in the perception of effective and ineffective teachers. (ii) There was no significant difference with a set of work values between effective and ineffective teachers. (iii) There was no significant difference in giving ranks to work values between effective and ineffective teachers. The emotive aspects of work were considered to be those aspects of work with which a teacher was associated emotionally.

The sample comprised thirty effective and thirty ineffective teachers randomly selected from 100 college teachers of Agra. The tools used were Work-Value Differential and Teacher Effectiveness Rating Scales developed by the author.

The major findings of the study were: (i) The general factor model (EPA) was present in the perception of both the effective and the ineffective teachers. The only difference was that the cluster of scales, honest-dishonest, constructive-destructive, unselfish-selfish, selfish, etc. which constituted one independent factor in the effective teachers' perception was missing from the perception of the ineffective teachers as an independent factor although it made a part of evaluative factor. (ii) The factor of novelty failed to appear in the ineffective teachers' perception although the factor showed up prominently in the effective teachers' perception. (iii) The effective and the ineffective teachers evaluated various aspects of their work on the basis of goodness or badness, strength or weakness and activeness or passiveness associated with these aspects. The effective teachers, on the other hand, were also governed in their evaluation by additional factors such as presence or absence of elements of moral attributes and newness in the specific job situation. (iv) Productivity or efficiency of a teacher increased with opportunities for more of social service, more of intellectual challenge and more of independence. The ineffective teachers found the teaching job lacking in economic returns. The emotive values for the effective teachers were social service, intellectual challenge and independence and for the ineffective teachers economic returns. (v) The emotive areas of interest for the effective teachers were social service, chances of progress, prestige and intellectual challenge, while for the ineffective teachers, these were economic returns, chances for progress, prestige and power. (vi) The effective teachers were least attracted by economic returns and surroundings whereas the ineffective teachers were least worried about intellectual challenge and independence.

1132. CHIPLUNKAR, V.V., *Designing an Operational Plan of Teacher Development through Self-assessment*, Directorate of Education, Government of Maharashtra, Pune, 1980

The objectives of the study were: (i) to help teachers in assessing their own performance periodically, (ii) to motivate them to make constant efforts to introspect and improve their own performance, (iii) to help teachers understand their roles and functions, (iv) to provide teachers with guidelines for increasing their own professional competence, and (v) to attempt constant improvement in the school climate through the teachers' development particularly in weak schools.

The study contemplated designing a tool for the self-assessment of teachers keeping in view their roles as a subject teacher, as a class teacher and as a member of the teaching community. A questionnaire covering these three roles was prepared by the investigator. A five-point scale was adopted for assessing the various performance factors included in the tool. The sample in the first stage of the development of the tool comprised fifty teachers. In the stage of tryout for exploratory study, the sample comprised 100 teachers from six secondary schools.

The salient findings of the study were: (i) The mean scores on the three parts of the questionnaire were consistent throughout. (ii) Efforts exerted by teachers from different schools appeared to be similar. The actual results of the schools in the S.S.C. examination of 1980 did not show much concurrence even though the school which had the highest percentage of successful students also had the highest mean score on the questionnaire. (iii) The factors governing the diversity of results in the public examination might be other than those solely related to teachers' understanding of their roles. (iv) The questions on innovations in teaching methodology and their recording needed further elaboration, and a few items reflecting job satisfaction of teachers needed to be included in the questionnaire.

*1133. CHOPRA, R.K., *A Study of the Organizational Climate of Schools in relation to Job Satisfaction of Teachers and Students' Achievement*, Ph.D. Edu., Agra U., 1982

The objectives of the investigation were: (i) to study the overall job satisfaction of teachers working in schools having different organizational climates, (ii) to identify the areas of job satisfaction on which the teachers of schools having different organizational climates differed, (iii) to study students' achievement adjusted for intelligence and socio-economic status in schools having different organizational climates, and (iv) to study the relationship between teachers' job satisfaction and students' achievement after partialling out the effects of intelligence and socio-economic status on achievement scores.

The group-within treatment design was adopted to suit the purpose of the study. Six types of organizational climates — open, autonomous, familiar, controlled, paternal and closed — were treated as six treatments, with the school as the unit of sampling. Since the purpose was to study teachers' job satisfaction and students' achieve-

ment in different organizational climate schools, variables like the sex of students and the management and location of schools were controlled by choosing the schools having students of the same sex (boys), from the same area (urban) and from the same type of management (Government). Further, to study organizational climates in relation to students' achievement, the effects of intelligence and socio-economic status on achievement were eliminated by the adjustment of achievement scores for these two variables. The two-stage sampling technique was adopted for conducting the study. At first, all the forty-two government boys secondary and senior secondary schools located in the urban area of the south educational district of Delhi were surveyed and six types of organizational climates prevailing in them were identified. At the second stage, the stratified random sampling procedure was followed for selecting three schools from each of the six climate groups for studying criterion and control variables. Thus, the sample for the study included 272 teachers and 620 students of eighteen randomly selected schools. The tools used for data collection were Sharma's School Organizational Climate Description Questionnaire, Wali's Teacher Job Satisfaction Inventory, Jalota and Kapoor's Socio-Economic Status Scale, Raven's Standard Progressive Matrices, and Achievement Proforma. One-way analysis of variance, analysis of covariance, Newman-Keul's test and partial correlation coefficient were the statistical techniques used for the analysis of the data.

The major findings of the investigation were: (i) Among the six climates, the open climate schools showed the highest overall teacher job satisfaction, followed by the autonomous, familiar, controlled, closed and paternal climate schools, respectively. (ii) Overall job satisfaction of the teachers in the open climate schools was significantly different from that of the teachers in the closed and paternal climate schools at 0.05 level. (iii) The schools having other five types of climates did not show significant difference among themselves in respect of overall job satisfaction of the teachers even at 0.05 level. (iv) Out of the fifteen areas of teachers' job satisfaction, only in two areas, namely, supervisor and identification with the institution, there were significant differences among different climate type schools. (v) The teachers in the open climate schools had significantly higher job satisfaction in the area supervisor than those in closed climate schools at 0.05 level. (vi) Job satisfaction of the teachers related to the area identification with the institution was significantly higher in the open climate schools than in the paternal and closed climate schools at 0.05 level. (vii) Stu-

dents' achievement (adjusted for intelligence and socioeconomic status) was not significantly different in different climate type schools even at 0.05 level. (viii) There was no significant relationship between teachers' job satisfaction and student achievement.

- *1134. DAS R.C., PASSAI, B.K., JANGIRA, N.K., SINGH, A., *Relative Effectiveness of Variation in Microteaching Components: an Experimental Study*, Dept. of Teacher Education, NCERT, 1980

The study was designed to investigate the effect of variations in micro-teaching components of modelling, feedback and setting on the teaching competence of student-teachers. The study purported to realize the specific objectives concerning (i) the relative effectiveness of different sources of feedback on the teaching competence of student-teachers and their attitudes towards teaching, (ii) the comparative effectiveness of perceptual and symbolic modelling on the teaching competence of student-teachers and their attitudes toward teaching, (iii) the relative effectiveness of microteaching under simulated conditions and under real classroom conditions on the teaching competence of student-teachers and their anxiety levels, (iv) the effect of varying class size on the teaching competence of student-teachers and their anxiety level, and (v) the minimum number of microteaching cycles required for student-teachers to master the skills.

In all 300 student-teachers from sixteen colleges of education participated in the study. The treatment variations were allocated to clusters of colleges of education. The study employed pretest-posttest control group design wherein data on teaching competence were collected by observing two lessons of each of the student-teachers using the Baroda General Teaching Competence Scale. Teachers Attitude Inventory and Anxiety Inventory were also administered before and after the training. The t-test was used to test the significance of difference between the mean gain scores on the three variables.

The main findings of the study were: (i) the peers feedback was significantly more effective than self feedback through audiotape in the development of general teaching competence among the secondary student-teachers, (ii) The feedback provided by peers and college supervisors and the feedback from peers and audiotape were equally effective in the development of general teaching competence in the secondary student-teachers. Besides, the peers' feedback was equally effective

as compared to the feedback from the peers and college supervisors. (iii) There was no clear-cut evidence regarding the comparative effectiveness of the peers' feedback and the college supervisors' feedback in the development of general teaching competence in the secondary student-teachers. (iv) There were no conclusive results with regard to the comparative effectiveness of perceptual and symbolic modelling in developing general competence in the secondary student-teachers. (v) Microteaching under simulated conditions and under real classroom conditions was equally effective in developing general teaching competence in the secondary student-teachers. (vi) The development of general teaching competence was not affected if the same or different teaching unit were taught in the 'reteach' session of microteaching. (vii) Development of general teaching competence was not affected adversely when the micro-class size was increased from 9 to 13. (viii) Two microteaching cycles for each skill appeared to be desirable for acquiring a reasonable level of mastery over the teaching skills. (ix) Attitude towards teaching and the level of anxiety of the secondary student-teachers were not affected by specific variations in the different components of microteaching, namely, the feedback, modelling condition, teaching unit tried out in the study.

1135. DAS, R.C., PASSI, B.K., JANGIRA, N.K., and SINGH, A., *Effectiveness of Different Strategies of Integration of Teaching Skills in Developing General Teaching Competence of Student-teachers*, Dept. of Teacher Education, NCERT, 1982

The objectives of the investigation were: (i) to determine the effectiveness of non-integration strategy and summative model of integration of teaching skills in developing general teaching competence in student-teachers, (ii) to study the relative efficacy of non-integration strategy and additive model of integration of teaching skills in developing general teaching competence in student-teachers, (iii) to determine the comparative effectiveness of non-integration strategy and dyad strategy of integration of teaching skills in developing general teaching competence in student-teachers, (iv) to study the relative effectiveness of non-integration strategy and summative model of integration of teaching skills on the integration of selected teaching skills, (v) to determine the relative efficacy on non-integration strategy and additive model of integration of teaching skills on the integration of selected teaching skills, and (vi) to study the relative efficacy of non-integration

strategy and dyad strategy of integration of teaching skills on the integration of selected teaching skills.

The study was undertaken with 264 student-teachers and M.A. (Education) students from thirteen colleges of education. The General Teaching Competence Scale and the Indore Teaching Assessment Scale were used to measure the general teaching competence and the competence to integrate the skills learnt. An evaluation proforma for teaching skills was used to observe the acquisition of skills along with the Teacher Attitude Inventory (TAI). The effectiveness of the integration strategies was studied between a group of student-teachers proceeding to block student teaching immediately after practising the teaching skills using microteaching (non-integration strategy group or vicarious integration group) and a group with the intervention strategies on summative model, dyad model or additive model.

The main findings of the investigation were: (i) The summative integration strategy tended to improve the teaching competence as well as the quality of integration of the teaching skills. (ii) The additive strategy of integration of the teaching skills did not improve the general teaching competence of the student-teachers but tended to improve the quality of integration of the teaching skills. (iii) The dyad strategy of integration tended to improve the general teaching competence of the student-teachers as well as the quality of integration of the teaching skills but the latter was not significant.

1136. DESAI, B.V., *A Study of the Outstanding Problems of Teachers of Standards V to VII of the Marathi Language Side of Municipal Primary Schools of Bombay*, Ph.D. Edu., Bom.U., 1981

The main objectives of the study were: (i) to find out the personal problems of teachers and whether these affected their class teaching, (ii) to identify the problem areas in the class teaching, (iii) to obtain information on the parents' understanding of the needs of their children attending municipal primary schools, (iv) to assess the attitudes of teachers to the home background of children who attended municipal primary schools, and (v) to suggest guidelines for formulating a minimum programme of redressing the grievances of teachers and thereby achieving maximum utilization of municipal resources for the educational growth of children of Greater Bombay.

Data were collected through school visits, interviews with head teachers and questionnaires. A pilot questionnaire consisting of three parts was prepared and pilot

testing was carried out on 100 teachers of Standards V to VII. In the light of the responses received, the pilot questionnaire was revised and questions framed on twenty problem areas. The final questionnaire was administered to a random representative sample of 1,100 teachers. Incomplete questionnaires were rejected and 900 questionnaire-returns which were complete in many respects were finally picked up for analysis.

The main findings of the study were: (i) The main problem of the municipal primary teachers was the educational apathy of the homes of the children attending the municipal primary schools. (ii) Personal, domestic, family and social problems of the municipal primary teachers were relatively fewer. (iii) The problems regarding classroom situation, teaching aids, the use of class library and educational guidance ranked from fifth to tenth. (iv) The problem of transport was ranked second by the teachers. (v) The problems of accommodation and money were ranked second and third, respectively, by the male teachers. (vi) The problem of looking after one's own children at home was ranked fifth by the female teachers. (vii) Nearly 60 per cent teachers admitted that they did not like the practising schools. (viii) The problems of the teachers had significant relation with sex, educational background, the tenure of service and the family size. (ix) The teachers had positive attitudes towards the children attending the municipal primary schools. (x) There was no difference in the attitudes of the male and the female teachers, and of the city and the suburban teachers towards the children attending the municipal primary schools.

1137. DESAI, H.G., *Psychological Needs of College Teachers*, Dept. of Edu., Sau. U., 1975 (Sau. U.-financed)

The objectives of the study were: (i) to locate the psychological needs of male college teachers, female college teachers and college teachers in general, and (ii) to find out whether the psychological needs of college teachers differed with age level.

A questionnaire prepared by Thurstone and Melinger of University of North Carolina, containing questions based on the projective technique, was used as the base for the research. The relation of each question to each of the fifteen psychological needs was decided on the basis of detailed descriptions of the manifestations of these needs prepared earlier. The unanimous decision of five judges — one educationist, one psychologist, two linguists and one college teacher — was taken as the measure of validity in the Indian context. In the sample of

201 college teachers (169 male and 32 female) which was drawn from seven colleges of Bhavnagar city, 58 were under 30 years of age, 103 in the age group 30-39 years, 30 in the age group 40-49 years, and ten were 50 years and above.

The major findings of the study were: (i) The male teachers had six significant psychological needs. In descending order these were: dominance, order, understanding, achievement, change, and exhibition. The male teachers were lowest on abasement and play. (ii) The female teachers had only one significant need—order. Disregarding significance, their first five needs were: order, dominance, deference, change, and understanding. (iii) The male teachers were significantly high on the need for achievement, while the female teachers were not. On the other hand, the female teachers tended to have the need for deference. (iv) The college teachers (disregarding the sex) had six significant psychological needs. In descending order these were: dominance, order, understanding, achievement, change, and exhibition. (v) The needs for achievement, dominance and order were significantly prominent in the group of the teachers under 30 years of age. The needs for dominance and order were significant for the age group 30-39 years. A single need for order was significant for the age group 40-49 years while not a single need was significant for the teachers 50 years and above. (vi) The need for order ranked first at the age levels, while the need for dominance generally ranked second. (vii) The need for achievement, which was significant in young teachers, gradually lost importance as the age level increased and was subsequently replaced by the need for intraception.

1138. DHOLAKIA, J.V., *Effects of Observers and Feedback upon Changing the Classroom Performance of Pupil-teachers*, Ph.D. Edu., MSU., 1980

The major objectives of the investigation were: (i) to analyse the comments given by observers of practice lessons taught by pupil-teachers, (ii) to study the effects of academic qualifications, teaching methods and the status of observers upon the feedback and achievement marks of pupil-teachers, (iii) to study the effect of the feedback upon changing the classroom performance of pupil-teachers, (iv) to study the relationship between qualifications, teaching methods, sex, place of residence and teaching experience of pupil-teachers and their classroom performance and achievement marks, and (v) to study the relationship between the observers' comments and the performance of pupil-teachers during practice

teaching and the annual examination.

As many as twenty-one null hypotheses were formulated in the light of the objectives of the study. The sample comprised 250 trainees of four randomly selected colleges of education. The sample of observers comprised forty-three teacher-educators and seventeen secondary teachers of practising schools. The observers' comments on 7,500 practice lessons given by 250 trainees were analysed. For the analysis of comments Cicirelli's Category System was used. Two proformas were prepared for collecting information from the observers and the pupil-teachers. Product moment correlation, t-test and analysis of variance were the statistical techniques used for data analysis.

The major findings of the investigation were: (i) The observers gave more negative comments than positive. (ii) The graduate observers gave more comments than the postgraduate observers. (iii) The graduate and the postgraduate observers did not differ in their grading of the lessons. (iv) The science lessons got more scores than the humanities lessons. (v) The teacher-educators and the secondary teachers did not differ in the number of positive comments but the teacher-educators gave more negative comments than the secondary school teachers. (vi) The college observers were more lenient in giving grades than the school observers. (vii) Pupil-teachers' performance improved, positive comments increased and negative comments decreased as the number of lessons advanced. (viii) The postgraduate pupil-teachers received more positive comments than the graduate pupil-teachers but the two did not differ in negative comments and in the achievement scores. (ix) The science student-teachers scored significantly more than the humanities student-teachers in the final scores. (x) The male trainees received more positive comments and the female trainees more negative comments but their achievement scores did not differ significantly. (xi) The urban and the rural trainees did not differ significantly in positive comments but the urban trainees received more negative comments though they scored more than the rural trainees in the examination. (xii) The experience of the trainees was positively related to the achievement. (xiii) The achievement in lessons during the year was positively related to the final annual examination marks.

1139. DUBEY, T.B., *A Comparative Study of Secondary Teacher Education in Madhya Pradesh and Maharashtra*, Ph.D. Edu., Sag. U., 1981

The main objectives of the investigation were: (i) to

make a comparative study of teacher education in Madhya Pradesh and Maharashtra, (ii) to identify the pattern of teacher education in the two neighbouring States, (iii) to highlight the problems of secondary teacher education institutions, (iv) to suggest means to improve teacher education by drawing up realistic programmes and future plans of teacher education, and (v) to develop coordination between the practice teaching programmes in the two States.

The study encompassed government and non-government colleges of education and university departments of education of Madhya Pradesh and Maharashtra imparting teacher education at the secondary level. It was a historical study based on the analysis of the annual reports, the commission and committee reports, the newsletters of the NCERT, the documents available in various departments of the government and other literature relevant to the subject. The data were presented in descriptive form as teacher education in India, in Madhya Pradesh and in Maharashtra under separate heads. Further problems and issues and the emerging trends in teacher education in Madhya Pradesh and Maharashtra were presented. The history of secondary teacher education in Madhya Pradesh and Maharashtra was traced from early days.

The data indicated: (i) In Madhya Pradesh the number of colleges of education rose from two in 1947 to fifty-one in 1978. (ii) In Madhya Pradesh 80 per cent of the colleges were government colleges whereas in Maharashtra only 27 per cent were government colleges and 61.5 per cent private colleges. (iii) Detailed descriptions of the teacher education programmes in Madhya Pradesh were provided with reference to admission criteria, teacher candidates, their age, details of curriculum including its structure, objectives and contents of each paper, practical training in teaching, craft education and sessionals, preparation of aids, number of observation and criticism lessons, educational trips, cultural activities and so on. The Fifth Annual Conference of the State Board of Teacher Education in 1979 led to the preparation of the Need-based Curriculum for Bachelor of Education courses, which was further validated in several subsequent conferences and workshops and implemented in several universities of Madhya Pradesh. For Maharashtra, the study recorded the terms of reference of the Maharashtra Committee on Teacher Education, development of teacher education, the duration, degree in teaching, its curricula, practice teaching provision, co-education, problems of buildings and equipments, hostel facilities, admission criteria, teacher candidates versus freshers, the scheme of examination,

the staff and their workload, and the curricula. (iv) The number of practice lessons in Maharashtra varied between thirty and forty, except Bombay University where it was twenty; in Madhya Pradesh also there was provision for forty lessons but student-teachers taught 30-35 lessons. (v) The duration of teacher education in both the States was one year. (vi) In Maharashtra, despite the provision of selection for admission, the colleges of education faced the problem of recession in the enrolment of students. The teachers who came for training without pay faced severe financial problems. (vii) A large number of teacher-educators offered as special methods, subjects for which they were not qualified. (viii) The teacher-educators' low salary prevented them from subscribing to journals; inadequate library stock in most of the colleges prevented them from keeping themselves up to date. (ix) In the practice teaching programme no training was given in conducting out-of-class activities and in school management. (x) The problems of teacher education as listed in Madhya Pradesh were: absence of a clear-cut evaluation procedure in the curriculum document, lack of financial provision for practice teaching in villages for freshers, lack of coordination between the intake of student-trainees and their placements, late admissions, stagnation of some teacher-educators, under-emphasis on field work during a training course, and so on.

***1140.** DUTT, R., *A Study of Social Cohesion in the Elementary Teacher Training Institutions and Its Relationship with Attitude and Adjustment of Student-teachers*, Ph.D. Edu., Mee. U., 1983

The main objectives of the research were: (i) to study the relationship of summated social cohesion and its component variables such as inter-personal attraction (IPA), evaluation of the group as a whole (EGW), closeness with the group (CWG), expressed desire to remain in the group (EDG) and perception of leadership and decision-making process (LSDM) with the student-teacher's adjustment to teaching, peers, teachers, institution, and summated adjustment, and (ii) to study the student-teacher's attitude towards teaching profession (ATP), classroom teaching (ACT), child-centred practices (ACCP), educational process (AEP), pupils (AP), teachers (ATR) summated attitude scores (ATS) and institutions (ATI).

The study followed a correlation design wherein intercorrelations between the variables of social cohesion and the student-teacher's outcomes (attitude and adjust-

ment) were studied. The static two group design for testing the difference between the means of the student-teacher's outcome variables was employed. Out of 185 elementary teacher training institutions, 45 institutions were selected as the sample of the study. All teacher-educators and final year student-teachers in the selected teacher training institutions were covered. The tools used in the study to collect data were: Student Teacher Adjustment Inventory developed by the investigator, Attitude of Student Teachers Towards Institution developed by the investigator, Teacher Attitude Inventory by Ahluwalia and Socio-economic Status Scale Questionnaire by Kapoor and Singh. The t-test was employed to test the significance of difference between the means of two extreme groups of institutions.

The major findings of the study were: (i) High correlations between the social cohesion components, viz, IPA, EGW, CWG, EDRG, LSDM and the total social cohesion score contributed to the total score. (ii) The social cohesion scores on CWG and the student-teacher's adjustment scores on peers had negative correlations which were significant. (iii) The social cohesion scores on IPA, CWG, and LSDM and the student-teacher's attitude scores on the teaching profession had negative correlations. (iv) Correlations between adjustment components (teaching, peers, teachers, institution and total) and attitude components (ATI, ATP, ACT, ACCP, AEP, AP, ATR and ATS) were significant. (v) In the male teacher training institutions, most of the significant correlations were concentrated between the social cohesion components and the attitude variables. The social cohesion scores on CWG, LSDM and the student-teacher's attitude towards the teaching profession, had negative correlations. (vi) In the female teacher training institutions most of the significant correlations were concentrated between the social cohesion components and the adjustment variables. The correlation between the social cohesion scores on CWG and the student-teacher's adjustment scores on teaching was significant at 0.05 level. CWG had negative correlation with adjustment to the peers. (vii) The differences between the mean scores regarding the adjustment towards teaching and teachers were significant in the groups of institutions with high and low social cohesion. (viii) The differences between the mean scores regarding the attitude towards pupils and institutions were significant in the groups of institutions with high and low social cohesion.

1141. DUTTA, R.S., *Teachers' Attitude towards Imparting Sex Education in Schools*, Ph.D. Edu.,

Bom. U., 1964

The main objectives of the study were: (i) to investigate the attitudes of teachers towards imparting sex education, and (ii) to investigate the difficulties of teachers in imparting sex education.

Five hundred and sixty subjects were selected from the secondary school teachers of the cities of Bombay and Calcutta irrespective of their age, experience, religion, sex and qualifications. A test was constructed, which was divided into two parts, the attitude test and ranking the difficulties. The attitude test contained forty items under five different heads. For ranking the difficulties teachers were asked to rank the following ten items according to their own order of difficulty: (i) lack of textbooks, (ii) public criticism, (iii) ignorance in the subject, (iv) lack of knowledge in sex vocabulary, (v) backwardness of the society, (vi) ethical bindings, (vii) strong emotional ties, (viii) shyness of the teachers, (ix) prejudice towards the opposite sex, and (x) lack of training and guidance. A pilot test was conducted on 132 subjects. Reliability of the test was computed by the split-half method and found to be 0.80. Reliability index of the test was 0.89.

The main findings of the study were: (i) In general, the attitude of the teachers to sex education was favourable. (ii) Experience seemed to have no influence on the attitude, but the city and sex-difference had some influence. (iii) No significant difference was noticed between different groups regarding the nature of difficulty. (iv) The main difficulties were ignorance in the subject, social backwardness and lack of training. (v) Proper training programme in regard to both content and methods of teaching was necessary, in addition to extensive propaganda through parent-teacher associations in schools.

1142. GADGIL, A.V., *A Survey of Teachers Working in Primary Schools in Pune Municipal Corporation Area*, Indian Institute of Education, Pune, 1980

The main objective of the study was to undertake a survey of teachers working in primary schools in Pune. The survey aimed at studying the demographic, academic and professional aspects of primary teachers. This was a census survey covering all teachers.

The major findings were: (i) During 1979, there were 336 primary schools in the Pune Municipal Corporation Area, of which 129 were aided schools (all mixed) and 207 Municipal Corporation Schools (130 boys' and 77

girls'). 76.79 per cent of the schools had Marathi medium, 11.6 per cent English medium, 7.146 per cent Urdu medium. There were six Gujarati-medium schools, and a few Sindhi, Kannada, Tamil and Telugu medium schools. (ii) The total number of teachers was 2,396 of whom 1,177 worked in aided schools. Of these (1,177), about 1,112 (94.97 per cent) were females. In corporation schools there were 2,119 teachers with 1,513 (71.40 per cent) females. Of the total number of 3,296 teachers, 79.64 per cent were females. About 36 per cent of the teachers were in the age group 26-35 and about 40 per cent in the age group 36-50. About 11 per cent teachers were PSC, 75 per cent SSC, 10.0 per cent B.A., 2.18 per cent M.A., 0.85 per cent B.Sc., 0.09 per cent M.Sc. and 0.21 per cent B.Com. One hundred and fifty three (4.64 per cent) teachers were untrained. Of these 137 were in private aided schools. Eight hundred and thirteen teachers (158 male and 655 female) were having about five or less than five years of experience whereas 379 had more than 25 years of experience. (iii) There were more combined classes in aided schools than in corporation schools. About 10 per cent teachers taught Classes V to VII independently in corporation schools. About 6.18 per cent teachers did not teach any class or any subject. (iv) About 87 per cent teachers taught all subjects. Teachers usually had orientation for one week in various subjects. Only 123 teachers had orientation of more than four weeks. About 1,000 teachers had not attended any orientation course. (v) Adequate number of teachers for teaching fine arts, drawing, music, craft, sewing, embroidery etc., were not available.

A number of suggestions were given on the basis of the survey data.

***1143.** GADGIL, A.V., *A Study of the Problem of Primary Teachers in Pune Municipal Area regarding Time, Energy and Money They have to Spend for Going to School and Returning Home*, Indian Institute of Education, Pune, 1981

The tool used was a questionnaire which was personally administered to seek information on (i) the distance covered by the teachers to go to school and come back home, (ii) the mode of travel, (iii) the shift they had to attend in schools, (iv) the time required, (v) the expenditure incurred, (vi) the choice of school, if any, and why, (vii) reasons, if any, for not continuing in the same school, etc. The sample studied consisted of 3,296 teachers.

The findings of the study were: (i) 43.71 per cent

teachers went to school on foot, 30.99 per cent by bus, 10.73 per cent on bicycles, 11.85 per cent occasionally by auto-rickshaws, 1.29 per cent by private vehicles, 0.26 per cent by auto-rickshaws (regular) and 0.99 per cent by train. (ii) 48.88 per cent teachers required up to 15 minutes to go to school, 24.82 per cent up to 30 minutes, 19.32 per cent up to one hour and 6.98 per cent more than one hour. They required the same time to return home. (iii) 47.36 per cent teachers did not require to spend anything on travel for going to school, 10.56 per cent required up to Rs.10 per month, 7.31 per cent up to Rs.15 per month, 7.95 per cent up to Rs.20 per month, 10.62 per cent up to Rs.30 per month, 5.58 per cent up to Rs. 40 per month, 5.43 per cent up to Rs. 50 per month and 5.19 per cent more than Rs.50 per month. (iv) 65.93 per cent teachers reported that they would like to continue in the same school, 12.25 per cent liked to go to some other school, 2.85 per cent to any other school, 16.14 per cent to a school near their residence, 0.21 per cent away from their residence; 1.12 per cent wanted morning shift and 1.49 per cent noon shift. (v) The teachers desired to work in schools where they felt they had (a) freedom to work, (b) cooperation from the colleagues, (c) intelligent students, (d) job satisfaction, and (e) good atmosphere. (vi) The problem of transfers was grave in corporation schools as compared to private schools. Corporation officials could not satisfy all those who had applied for transfer.

***1144.** GADGIL, A.V., *Expectations of Primary School Teachers in Pune regarding Further Training, Orientation and Continuing Education*, Indian Institute of Education, Pune, 1981

The objectives of the survey were: (i) to study qualifications, experience, subjects taught and other personal information of teachers, (ii) to know the expectations of primary teachers regarding further or in-service training, (iii) to know the subjects most liked by teachers, (iv) to know the games liked and played by teachers, (v) to know the magazines (quarterlies, bimonthlies, monthlies, etc.) teachers read, (vi) to know the magazines to which teachers subscribed, (vii) to know the books teachers had read during the period June 1978 to June 1980, (viii) to know what teachers were able to write independently (creatively), (ix) to know how teachers spent their leisure time, (x) to know teachers' hobbies and the level of proficiency in the same, (xi) to know teachers' reasons for the lowering of the standard of primary education, (xii) to know the programmes

teachers felt were necessary to improve the standard of primary education, (xiii) to know the subjects, or areas in which teachers required additional knowledge to improve the quality of education, and (xiv) to ascertain time and place for orientation courses as also the mode of orientation.

There were 3,534 teachers in the Pune Municipal area during the year 1978-79. Out of them, 2,289 were from municipal schools and 1,245 from aided private schools. Fifteen per cent, i.e. 526 teachers, were selected for study—116 males and 410 females. Consideration was given to various media of instruction and adequate representation was given to teachers holding different types of qualifications. The sample was thus random and stratified. A survey schedule-cum-questionnaire was used to collect information.

The following were the observations of the survey: (i) Most of the teachers desired to have continuing education/orientation in school subjects to get mastery over them. (ii) Most of the teachers indulged in indoor games. (iii) Games which did not cost much were popular with the teachers. (iv) Children's magazines and some popular Marathi magazines devoted to social education were popular with the teachers. (v) A very insignificant number of teachers subscribed to magazines leading to professional growth. (vi) Very few teachers engaged themselves in creative writing. (vii) Forty-two per cent teachers did practically nothing in their leisure time. (viii) More than 50 per cent teachers desired to have continuing education to improve their qualifications. (ix) Fifty-seven per cent teachers did not see any advantage in orientation programmes. (x) Very few teachers were aware that they themselves were responsible for the unsatisfactory standard of primary education.

1145. GCPI, *A Study of Comparative Effects of Microteaching under Simulated Condition and Real Condition upon General Teaching Competence and Attitude towards Teaching*, Allahabad, 1977

The objectives of the investigation were: (i) to study the comparative effectiveness of microteaching under simulated condition (SMT) and under real condition (MMT) on general teaching competency (GTC), (ii) to study the comparative effectiveness of SMT and MMT on the retention of general teaching competency, (iii) to study the comparative effectiveness of SMT and MMT on the retention of GTC after micro-lesson practice in the real classroom situation, and (iv) to study the comparative effectiveness of SMT and MMT on the attitude

of pre-service secondary school teachers towards teaching.

Out of ninety-two student-teachers of GCPI, Allahabad, twenty postgraduate (mathematics) teachers were selected. The sample was matched with respect to intelligence, attitude towards teaching and age. The tools used were Teacher Attitude Inventory, Culture Fair Intelligence Test (Scale 3, Form A), and the Baroda General Teaching Competence Scale BGTC and evaluation proformas. After the formation of the two equivalent groups, one group received SMT while the other MMT treatment, which was randomly divided. The data were analysed by employing t-test.

The findings of the investigation were: (i) There was no significant difference between the mean scores of SMT and MMT groups upon GTC. (ii) There was no significant difference in the retention of GTC by the two groups. (iii) The mean scores of SMT and MMT on the BGTC scale after micro-teaching practice in the real classroom situation did not differ significantly from one another. (iv) The attitude of the two groups did not differ significantly from each other.

1146. GCPI, *A Comparative Study of Effects of Microteaching under Varying Sources of Feedback and Attitudes of Teacher-trainees towards Teaching*, Allahabad, 1979

The objectives of the investigation were: (i) to study the effectiveness of supervisory feedback and peer feedback in microteaching on general teaching competence of pre-service secondary school teachers, (ii) to study the effectiveness of two procedures of feedback on the retention of general teaching competence of pre-service secondary school teachers, (iii) to study the effectiveness of supervisory feedback and peer feedback on attitudes towards the teaching profession of pre-service secondary school teachers, and (iv) to study various academic and administrative problems related to the implementation of microteaching in departments of education.

Twenty students (science graduates/postgraduates—mathematics) were selected from 100 trainees of the GCPI of 1977-78. They were divided into two groups of ten students each. The equivalence was met in respect of age, educational qualification, intelligence, and attitude towards teaching. Of the two groups, one group was exposed to microteaching under simulated condition wherein the feedback was given by the peer, and the second was exposed to microteaching under real condition

(MMT), the feedback being given by college supervisors. The tools used were the Teacher Attitude Inventory (ATAI), the Baroda General Teaching Competence Scale (BGTC), Culture Fair Intelligence Test Scale 3 Form A, and observation schedules prepared by the CASE. The data were analysed by using t-test and Mann Whitney U-test.

The findings of the investigation were: (i) There was no difference in the training outcomes of the two treatments of SMT and MMT approaches on the BGTC scale. (ii) There was no difference in the retention of general teaching competence of two treatments of SMT and MMT. (iii) There was no difference in the level of retention of general teaching competence of the two treatments of SMT and MMT. (iv) The treatments were equally effective in inculcating attitude towards teaching in student-teachers.

1147. GCPI, *A Study of Relationship of Academic Achievement with Attitude towards Teaching among Teacher-trainees*, Allahabad, 1981

The main objective of the study was to find out the relationship between academic achievement and attitude towards teaching among the teacher-trainees enrolled in the L.T. course.

All the ninety teacher-trainees enrolled in the L.T. course (general) of the Government Central Pedagogical Institute, Allahabad, during the 1980-81 session, constituted the sample. The Ahluwalia Teacher Attitude Inventory was employed for finding the attitude of the teacher-trainees towards teaching and their academic achievement was taken from their entrance records in the L.T. course. Product moment correlation was computed between the academic achievement score and the score for the attitude towards teaching.

The findings of the study showed no relationship between academic achievement and attitude towards teaching among the teacher-trainees.

1148. GOMATI MANI and GONSALVES, C., *A Study of the Self-concept of the Student-teachers in relation to Their Performance in the Practical Teaching*, Stella Matutina College of Education, Madras, 1977

The major aim of the study was to identify the relationship between the students' teaching performance and the self-concept, keeping in view the background

variables—previous academic achievement, age, socio-economic background and the previous teaching experience.

The sample comprised 100 students undergoing B.Ed. training at the Stella Matutina College of Education during 1976-77. The tool used was a self-concept inventory specially developed for the study. Product moment coefficient of correlation was used for data analysis.

The major findings of the study were: (i) The teachers with more teaching experience had better self-concept than the teachers with less teaching experience. (ii) The teachers with better self-concept scored more on practice teaching than the teachers with poor self-concept. (iii) Age had some influence on self-concept. Lower age was accompanied by better self-concept and more effective teaching. (iv) Social-economic background had clear influence on self-concept and consequently on teaching effectiveness. In the case of teachers in the upper socio-economic status the correlation between the self-concept and the teaching practice scores was more than in the case of the middle socio-economic status group. (v) The relationship between the self-concept and the teaching practice scores in general was not significant.

1149. GOYAL, G., *A Study of Teachers' Problems, Attitudes and Output related to Research in Agricultural Universities in India*, Ph.D. Home Science, MSU, 1980

The major objectives of the investigation were: (i) to study the problems of teachers in doing research, (ii) to study the attitude of teachers toward research, (iii) to study the research output of teachers, (iv) to study the differences in the problems, attitudes and research output of teachers according to their personal characteristics, and (v) to study various interrelationships among the personal characteristics of teachers and their problems, attitudes and output related to research.

The population of the study comprised all the professors and associate professors teaching in various colleges in agricultural universities of India. Out of 1,205 units in the population, the sample chosen for the study consisted of 613 units. Data were collected using a questionnaire which consisted of personal information, problems related to research and teachers' attitude toward research. The validity of the questionnaire was established by the methods of logical validation and jury opinion. The collected data were analysed by using percentages, chi-square test and correlation matrix.

The major findings of the investigation were: (i) The teachers often faced the problem of inadequate time, sometimes the problem of transportation and rarely the problems of laboratory facilities, library facilities, etc. (ii) The teachers held favourable attitude towards research. Significant differences in the attitudes of the teachers were observed with respect to their university, college, academic qualifications, sex and teaching experience. (iii) Twenty-two per cent of the research output was in the form of research papers published. Research guided and examined at both the M.Sc. and the Ph.D. levels constituted 28 per cent of the total research output of agricultural universities. (iv) Research that was produced, guided and examined was positively related to lack of laboratory chemicals and materials and of transportation facilities.

- 1150.** GOYAL, J.C., *A Study of the Relationship among Attitudes, Job Satisfaction, Adjustment and Professional Interests of Teacher-educators in India*, Ph.D. Edu., Del. U., 1980

The main objectives of the study were: (i) to measure attitudes, job satisfaction, adjustment and professional interests of teacher-educators of different categories based on sex, age, qualification and experience, (ii) to find out the difference in attitude, job satisfaction, adjustment and professional interests among groups of teacher-educators based on sex, age, qualification and experience, (iii) to find out the relationship among attitude, job satisfaction, adjustment and professional interests of teacher-educators of different categories, and (iv) to predict job satisfaction of teacher-educators by treating their attitudes, adjustment and professional interests as independent variables.

The sample consisted of 314 teacher-educators working in thirty-eight institutions, which included men and women of different age groups possessing different qualifications and teaching experience. The tools used were a self-constructed attitude scale, Indiresan's Job Satisfaction Inventory, Bell's Adjustment Inventory and a self-developed inquiry form for professional interests of teacher-educators. Mean, standard deviations, t-test, analysis of variance, product moment correlation, multiple linear regression analysis were used for statistical interpretation.

The major findings of the study were: (i) A large majority of the teacher-educators were favourably inclined towards their profession and were satisfied in the job. However, they were not well adjusted and had low

professional interest. (ii) The attitude and job satisfaction of different groups did not differ significantly. (iii) A majority of the teacher-educators had low interest in the profession. (iv) Emotional stability among the teacher-educators increased with age. (v) Professional interest among teacher-educators increased with teaching experience in a school. (vi) Attitude, job satisfaction and occupational adjustment among teacher educators were associated with one another, whereas social and emotional adjustment and professional interests were not related with other variables. (vii) Job satisfaction could be predicted by attitude and occupational adjustment but not by other variables.

- *1151.** GOYAL, J.C. and CHOPRA, R.K., *A Study of the Problems Bearing on Teacher Education in the Context of the 10 + 2 Pattern*, Department of Teacher Education, NCERT, New Delhi, 1979

The study was confined to the State of Maharashtra because the 10 + 2 pattern of school education was introduced by it soon after the report of the Kothari Commission was published. The objectives of the study were: (i) to identify the changes made in and the salient features of, the new school curriculum as recommended by the Education Commission and the NCERT, (ii) to examine the modifications made by the universities in the teacher education curriculum, in the light of the needs of teachers for the new system and to find out the status of facilities provided in the teacher education institutions in the State, (iii) to identify the problems faced by the various agencies in the preparation of teachers for the new pattern, and (iv) to provide suggestions for the problems likely to be faced by other States with regard to teacher preparation for the 10 + 2 pattern.

Data collection was done through a questionnaire for teacher education institutions, an interview schedule for various officers of the Department of Education, the Directorate of Technical Education and the State Board of Secondary Education, and a study of the syllabi of secondary and higher secondary schools and the B.Ed. programme.

The main conclusions of the study were: (i) The B.Ed. syllabus in all the universities of Maharashtra was not revised to suit the needs of the new school curriculum till the time of data collection. However, a State-level committee was being appointed to go into the question of revision of the B.Ed. syllabus. (ii) Since the syllabus of various subjects in the new pattern of school education had been enriched and a number of new activities had

been added, there was an urgent need for in-service training of existing teachers working in the schools under the new pattern. Such areas were environmental studies, art, music and other aesthetic activities, development of moral values, work experiences (SUPW) etc. (iii) Some TELs in the State were not offering work experience activities/SUPW. (iv) The teachers under training were not being prepared in the area of health and physical education as proposed in the new scheme. Arts was also not being offered with its enlarged scope. It was more or less done in the traditional form (by preparing charts, models, audio-visual aids, etc.) and not by training the student-teachers to develop aesthetic sense, creativity and appreciation of culture among children. (v) Training for the development of moral values in children was also not being given properly to student-teachers. (vi) Student-teachers were not prepared in the subject content in TELs. (vii) Many TELs had reported lack of staff possessing postgraduate degrees in English, geography, mathematics, science, commerce, economics, etc. (viii) Vocational subjects had been introduced in each academic stream and not as a separate stream as envisaged in the 10 + 2 pattern. As a result, pupils did not get a certificate of proficiency in vocational courses so as to qualify them for a job.

- 1152.** GOYAL, J.C., SABHARWAL, N., and TIWARI, A.D., *Development of a Model for Forecasting Teacher Manpower Requirements*, Dept. of Teacher Education, NCERT, New Delhi, 1982

The main objectives of the investigation were: (i) to study the trends in enrolment, teacher strength and number of sections during the period 1971-75, (ii) to identify factors that affected the demand for teachers in high schools, (iii) to develop a model for forecasting requirements of various types of teachers (trained graduate teachers, classical and vernacular teachers and other teachers in arts and science streams and other areas) for different categories and groups of schools, and (iv) to make projections of enrolment and teacher requirement of various types for different categories of schools and groups of subjects for the years 1980 and 1985.

Ninety-nine schools forming 10 per cent of the high schools constituted the sample. Data from the sampled schools were collected for the period 1971 to 1975. Analysis was done by using simple index number analysis, analysis of variance, Wilcoxon matched pairs

signed rank test, chi-square and time series analysis technique.

The major findings of the investigation were: (i) The total enrolment, teacher strength and number of sections increased significantly in all the years under reference with respect to the base year. (ii) The enrolment and teachers per section* increased in all the groups of schools except in the group of private schools while teacher strength increased in all the groups of schools in all the years when compared to the base year. (iii) The enrolment, teacher strength and teachers per section showed an increasing trend in all the years with respect to the base year in the categories of urban government girls, rural government girls and rural government boys schools. Besides, the teacher strength also increased in the categories of urban private girls, and urban private boys schools. (iv) The teacher-pupil ratio, teacher-section ratio and pupil-section ratio showed significant variance among the groups and categories of schools. (v) Average attrition rate in different groups, categories and the total sample of schools was 6.13. (vi) There was an unequal proportion of trained graduate teachers, classical and vernacular teachers and other teachers in different groups and categories of schools as well as in the total sample of schools.

On the basis of the findings a model for forecasting teacher manpower requirement was developed.

- 1153.** GULATI, K.C., *A Study of Factors Associated with Teachers' Predisposition to Adopt Educational Innovations*, Ph.D. Edu., MSU, 1980

The major objectives of the study were: (i) to find out how the different subgroups of teachers, classified according to certain personal characteristics, differed in their predisposition to adopt innovations, (ii) to establish relationship between predisposition to adopt innovations and the perceived characteristics and principals' colleagues' and students' support of innovations, (iii) to establish relationship between predisposition to adopt innovations and the perceived characteristics of innovations such as communicability, divisibility, complexity, and (iv) to determine the relative and joint contributions of the variables associated with the perceived characteristics of the school, the perceived characteristics of the innovations and the personality characteristics towards the prediction of the predisposition of teachers to adopt educational innovations.

The sample of the study consisted of 372 teachers — 203 male and 169 female — drawn from thirty-eight

higher secondary schools in the Union Territory of Delhi. Data were collected using educational innovation attitude scale, form for the indication of perceived values of the characteristics of the school and innovation, the combined six scale questionnaire, and biographical data form. The collected data were analysed by using t-test, product moment correlation and step-wise regression analysis.

Some of the major findings of the study were: (i) There was no significant difference between the mean predisposition scores of the male and the female teachers, younger and older teachers, those having five years' and more than five years' teaching experience, and those having bachelor's and master's degrees. (ii) Professionally satisfied teachers were significantly better predisposed to adopt innovations than those who were professionally not satisfied. (iii) There was a significant negative relationship between predisposition to adopt innovations and conservatism. (iv) Change-proneness, complexity, progressivism, dogmatism and venturesomeness jointly accounted for 46.76 per cent variance of the criterion variable in the case of the total sample of teachers.

*1154. GUPTA, B.C., *Evaluation of the Innovative Practices of Teaching in the Colleges of Education*, Ph.D. Edu., Nag. U., 1982

The main objective of the study was to evaluate the effectiveness of the innovative methods in the direction of better learning and higher achievement in colleges of education. The methods of lecture-cum-discussion, discussion, symposium, seminar, workshop, assignment and supervised study were experimented upon in the colleges of education at Sardar Shahar, Ajmer, Bikaner, Gulabpura, Jaipur, Jodhpur and Dabok. Control and experimental groups of fifty students each were formed in each of the seven colleges. The groups were equated on age, sex, intelligence, pre-achievement level, and educational qualifications. Each method was experimented upon in one of the seven colleges. Education and social change, the meaning of education, philosophy and its relationship with education, educational sociology, infectious diseases and their treatment, the laws and theories of learning and the teaching methods of Hindi prose were the seven topics from the syllabus selected for teaching by the innovative methods in serial order at the seven colleges selected. Unit tests were prepared in each of the selected topics and these were administered to both the control and the experimental

groups after the teaching was over. The control group was taught by the routine lecture method and the experimental group by the innovative method. Each of the groups of fifty students was divided into three subgroups according to their I.Q. — higher, average and lower. The scores obtained by each group were compared by computing means, standard deviations and t-values.

The results showed that the methods of discussion, symposium and supervised study were more effective than the lecture method at both 1 per cent and 5 per cent levels of significance. The discussion method proved to be very helpful to the lower intelligence group, The symposium method also gave better results and proved to be definitely more useful to the average group. The workshop method proved to be definitely superior in the case of the general group as well as the higher intelligence group. Nothing could be categorically said about the assignment method. The supervised study method gave better results at both the places. By and large, it was inferred that all the innovative methods, except the lecture-cum-discussion method, had established their comparative merit against the lecture method.

1155. GUPTA, M.D., *Purbi Uttar Pradesh main madhyamik vidyalayon ke adhyapakon ki prasthiti ka adhyayan*, (A Study of the Status of Secondary School Teachers in Eastern U.P.), Ph.D. Edu., BHU, 1978

The objectives of the study were: (i) to find out the educational, vocational, social, economic, political, religious and moral status of the secondary school teachers, and (ii) to give some suggestions for improvement in the status of the secondary school teachers.

The sample of the study consisted of 700 teachers of both sexes drawn from the secondary schools of eleven districts of Eastern Uttar Pradesh. It also included 700 students and 700 guardians. Data were collected through a secondary school teacher status questionnaire prepared by the investigator. The investigation was a social survey and only percentages were computed for different variables.

The major findings of the study were: (i) Of all the teachers, 48 per cent, 64 per cent, 62 per cent and 32.3 per cent had, respectively, second class, high school, intermediate, graduate and postgraduate certificates and degrees. Only 15.4 per cent, 5.5 per cent, 1.1 per cent and 0.7 per cent had first class certificates and degrees in the same order. (ii) Nearly 86.7 per cent teachers were trained. Only 7.2 per cent untrained teachers were desir-

ous of having training through summer courses or on leave with pay. Nearly 64.5 per cent male teachers and 25.5 per cent female teachers took part in games and sports. (iii) Further, 62.1 per cent male and 54.2 per cent female teachers had the habit of reading daily newspapers, weeklies and monthly magazines. (iv) In the opinion of 57.5 per cent guardians and 52.2 per cent students, the female teachers possessed more educational qualifications than the male teachers. Only 9.9 per cent teachers had pre-planned for entering into teaching job, for the rest it was by chance or situational impact. (v) In the opinion of 65.1 per cent teachers and 56.5 per cent guardians the professional status of the secondary school teaching profession was very low and they did not want to make their wards secondary school teachers. In the opinion of 46.2 per cent teachers and 31.4 per cent guardians the freedom of teachers was snatched away by the managing committees and political parties. Seventy-nine per cent teachers and 68.5 per cent guardians were in favour of framing a code of conduct for teachers. (vi) About 50.5 per cent teachers and 54.5 per cent guardians favoured nationalization of secondary education for raising the status of teachers. In the opinion of 66.1 per cent students and 72.7 per cent guardians teachers currently working did not manifest sincerity towards their profession. The guardians were of the opinion that teachers in rural areas commanded more social respect than those in the urban areas. (vii) More than 50 per cent male and female teachers were not satisfied with their present salary and income from other sources. (viii) In the opinion of 73.1 per cent teachers and 43.7 per cent guardians the main reasons for the lowering of economic status of secondary school teachers were their low salary and meagre facilities. Also, 54.5 per cent students and 38.6 per cent guardians suggested permission to teachers to take tuitions for improving their economic status. About 40 per cent teachers, 23.6 per cent students and 55.7 per cent guardians suggested that the secondary school teachers should be given salaries at par with doctors', engineers' and administrators' for improving their economic status. (ix) Only 10.5 per cent male teachers and 6.2 per cent female teachers were members of different political parties. Out of these, 54.8 per cent male and 66.6 per cent female teachers were members of the Congress Party. In the opinion of 56.5 per cent guardians teachers should not have any freedom of interfering in the political activities of the government but a majority of the students did not agree to this opinion. (x) Reservation of seats in the legislative council was opposed by 67 per cent guardians. (xi) Twenty-three per cent male and 20 per cent female teachers were members

of religious associations.

1156. GUPTA, S., *A Study of the Attitudes of Teachers of Agra University towards Higher Education*. Ph.D. Soc, Agra U., 1979

The study was designed to investigate the attitudes of the teachers of Agra University towards higher education, taking four aspects, viz., university autonomy, admission on the basis of selection, importance assigned to research and the importance assigned to higher education (at the postgraduate level). The attitudes were measured on scales based on the method of equal appearing interval. The sample included 300 teachers selected on the basis of systematic sampling.

The study yielded the following conclusions: (i) The majority of the teachers of the university and colleges had a positive view towards higher education. (ii) The male and the female teachers showed significant difference in their attitudes. (iii) As age increased, the attitudes tended to become negative. (iv) The teachers differed significantly in their attitude towards the trade-technical groups and the non-trade and non-technical courses of study. (v) Those teachers who had teaching experience had negative attitudes while those who had short experience showed positive attitudes. (vi) The standard of teaching influenced the attitude. (vii) Those teachers whose attainments were high showed negative attitude as compared to those whose attainments were low. (viii) The teachers' attitudes were affected by their satisfaction in the family life. (ix) Those teachers who had experiences of failure, had negative attitudes while those who had experiences of success, showed favourable attitudes. (x) The political condition of the country, the economic status and the working conditions affected teachers' attitudes. (xi) The teachers' attainments were positively related with the evaluation of students. (xii) The satisfaction/dissatisfaction of the teachers in respect of modern higher education affected the evaluation of students. (xiii) Teaching experience and evaluation of students were interrelated. (xiv) The teaching experiences, scholastic attainments, satisfaction with modern higher education affected the attitudes towards students' cooperation and welfare. (xv) The teaching experience and attainments affected their thoughts about the vice-chancellor's qualities. (xvi) Higher educational attainments and teaching experiences affected their thinking towards the role of the University Grants Commission in education.

- 1157.** GUPTA, S., *A Study of the Selected Input-Output Relationship of Elementary Teachers' Training Institutions in Punjab — a Systems Approach*, Ph.D. Edu., Pan. U., 1982

The major objectives of the investigation were: (i) to study the nature and extent of the inputs, viz., teacher-educator, student-teacher, finance, etc., in elementary teacher training institutions in Punjab, (ii) to study the nature and extent of output in elementary teacher training institutions, (iii) to study the relationship between input and output of elementary teacher training institutions, and (iv) to study the effect of significant variables (inputs) in predicting the student-teachers' performance (output).

Out of seventeen elementary teacher training institutions located in the twelve districts of the State of Punjab, fifteen institutions were selected for the study. Data were collected using questionnaires, JIM Scale, Socio-Economic Status Scale, Organizational Climate Description Questionnaire, Leadership Behaviour Description Questionnaire and Purdue Teacher Opinionnaire. The data were analysed using percentages, product moment correlation, multiple correlation, etc.

Some of the major findings of the investigation were: (i) The product moment coefficients of correlation between inputs (the quality of teacher-educators, academic motivation, leadership style, organizational climate, teaching methods, physical facilities) and output, as the total marks in the examination, were significant. (ii) The product moment coefficients of correlation between inputs (the quality of teacher-educators, the quality of student-teachers, academic motivation, the teacher's morale, leadership style, etc.) and output, as practical marks, were statistically insignificant. (iii) The product moment coefficient of correlation between finance as an input and total marks (theory and practicals) was not significant. (iv) The multiple regression coefficient with eight variables was 0.796, which showed that these factors played a significant role in predicting performance.

- 1158.** GUPTA, S.P., *A Study of the In-service Teaching Needs of the Secondary Teacher-educators*, Dept. of Teacher Education, NCERT, 1979

The objectives of the investigation were: (i) to study the relationship between the qualification and the in-service education proneness of secondary teacher-educators, (ii) to study the relationship between the pro-

fessional experience and the in-service education proneness of secondary teacher-educators, (iii) to identify the type of in-service education courses preferred by secondary teacher-educators in view of the emerging curriculum changes at the school level and the corresponding changes in the teacher education curriculum, and (iv) to identify the specific units under each of the curricular areas identified at (iii) above, and (v) to study the congruence between the qualifications and the instructional allocation.

The sample comprised 16 principals/vice-principals/professors, 13 senior lecturers/readers, 103 lecturers/assistant professors and 6 tutors/others from twenty-eight colleges of education. The tool used for data collection was a specially prepared questionnaire. The techniques used to analyse the data were chi-square test and content analysis.

The findings of the investigation were: (i) There was some measure of association, though not very strong, between the qualifications of secondary teacher-educators and their in-service education proneness. (ii) There was a small measure of association between the teaching experience and the in-service education proneness of teacher-educators. (iii) In view of the emerging curricular changes at the school level and subsequently at the teacher education level, the in-service education courses required by secondary teacher-educators were identified: (a) socially useful productive work, (b) vocationalization, (c) working with the community, (d) non-formal education, and (e) pedagogical and methodological subjects. (iv) By and large, there was congruence between the qualifications and the instructional allocation, except in the case of those secondary teacher-educators who were involved in the teaching of Methodology of Teaching Geography as they did not have any degree in geography.

- 1159.** GUPTA, S.P., *A Study of Job Satisfaction at Three Levels of Teaching*, Ph.D. Edu., Mee. U., 1980

The objectives of the study were: (i) to measure the job satisfaction of primary school teachers, secondary school teachers and college teachers, (ii) to find out the relationship between selected psychological variables and job satisfaction exhibited by primary school teachers, secondary school teachers and college teachers, (iii) to compare the job satisfaction of married teachers with that of unmarried teachers, (iv) to compare the job satisfaction of teachers of different age

groups, (v) to compare the job satisfaction of teachers of different experience groups, (vi) to work out multiple regression equations that could predict the job satisfaction of primary school teachers, secondary school teachers and college teachers, separately, and (vii) to compare the job satisfaction of primary school teachers, secondary school teachers and college teachers.

The sample consisted of 765 male teachers of primary schools, secondary schools and colleges of Meerut division, selected on the basis of stratified random sampling. The study used Teacher's Job Satisfaction Scale (TJSS), Attitude Towards Teaching Career Scale (ATCS), Meenakshi Personality Inventory (MPI), Personality Maturity Test (PMT) and Personal Data and Information Form (PDIF). The study applied product moment coefficient of correlation, multiple coefficient of correlation, regression analysis, F-test and t-test.

The findings of the study were: (i) Needs of achievement, affiliation and endurance were positively related while needs of autonomy, dominance and aggression were negatively related to the job satisfaction of primary school teachers. Needs of exhibition, succorance, abasement and nurturance were not related significantly with the job satisfaction of primary school teachers. (ii) Attitude towards teaching as a career and personality maturity were positively related to the job satisfaction of primary school teachers. (iii) Marital status, age and teaching experience were not associated to the job satisfaction of primary school teachers. (iv) Out of twelve variables only eight were significant contributors to the prediction of job satisfaction of primary school teachers. These eight variables were: attitude, n-aut, n-ach, n-aff, personality maturity, n-exh, n-end, and n-suc ($R = 0.675$). (v) Need achievement was positively related while needs of exhibition, autonomy and aggression were negatively related to the job satisfaction of secondary school teachers. Needs of affiliation, succorance, dominance, abasement, nurturance and endurance were not related significantly to the job satisfaction of secondary school teachers. (vi) Attitude towards teaching as a career and personality maturity were positively related to the job satisfaction of secondary school teachers. (vii) Marital status, age and teaching experience were not associated significantly with the job satisfaction of secondary school teachers. (viii) Out of twelve variables only eight were significant contributors to the prediction of job satisfaction of secondary school teachers. These variables were: attitude, n-ach, n-aut, personality maturity, n-end, n-dom, n-aba, and n-suc ($R = 0.767$). (ix) Needs of achievement and abasement were positively related while needs of nurturance and aggression were nega-

tively related to the job satisfaction of college teachers. Needs of exhibition, autonomy, affiliation, succorance, dominance and endurance were not related significantly to the job satisfaction of college teachers. (x) Attitude towards teaching as a career and personality maturity were positively related to the job satisfaction of college teachers. (xi) Unmarried college teachers were more satisfied than married college teachers. There was a U-shaped relationship between age and job satisfaction of college teachers. Teaching experience was not associated significantly with the job satisfaction of college teachers. (xii) Out of the twelve variables only five were significant contributors to the prediction of job satisfaction of college teachers. These variables were: attitude, n-agg, n-nur, personality maturity and n-aba ($R = 0.732$). (xiii) Primary school teachers were significantly less satisfied than secondary school teachers or/and college teachers. (xiv) Secondary school teachers and college teachers were almost equally satisfied with their job.

1160. GUPTA, U., *Job Involvement and Need Patterns of Primary School Teachers in relation to Teaching Effectiveness*, Ph.D. Edu., All. U., 1981

The objectives of the study were: (i) to find out the inter-relationship between job involvement and personal factors, psychological needs and teaching effectiveness, (ii) to find out the differences between male and female primary school teachers with respect to personal factors, psychological needs, job involvement and teaching effectiveness, (iii) to find out the differences between rural and urban primary school teachers on personal factors, psychological needs, job involvement and teaching effectiveness, (iv) to find out the differences in the relationship of job involvement and personal factors, psychological needs and teaching effectiveness with respect to male/female as well as rural/urban primary school teachers, (v) to find out the differences in the relationship of teaching effectiveness and personal factors, psychological needs and job involvement (personal and situational), (vi) to find out the differences between the teachers of minimum and higher qualifications on psychological needs, job involvement and teaching effectiveness, (vii) to find out the differences between the teachers of minimum and higher qualifications and the relationship of job involvement, psychological needs and teaching effectiveness as well as the relationship of teaching effectiveness with psychological needs and personal and situational job involvement, and (viii) to in-

investigate the contribution of personal factors, psychological needs and personal and situational job involvement to teaching effectiveness.

The sample comprised 839 (220 female and 619 male) teachers teaching in primary schools under the jurisdiction of Basic Shiksha Adhikari and Zila Parishad of Allahabad district. The tools used for collecting data were job involvement inventory, Edward Personal Preference Schedule, personal data schedule and observation schedule. Correlational, differential and multiple regression analyses were done.

The findings of the study were: (i) In the case of rural males and urban females, job involvement was not significantly correlated with personal factors, while in the case of rural females and urban males, age and experience were significantly and positively correlated with job involvement but income was not significantly correlated with job involvement. (ii) In the case of rural males, job involvement was not significantly correlated with psychological needs excepting n-aggression. With regard to rural female teachers, job involvement was not significantly correlated with any of the fifteen psychological needs. Among urban males, job involvement was significantly correlated with n-nurturance, n-endurance, n-heterosexuality and n-aggression but not significantly correlated with the remaining eleven needs. Regarding urban females, job involvement was significantly correlated with n-exhibition, n-succorance, n-nurturance, and n-endurance. (iii) As regards rural females and urban males, job involvement was not significantly correlated with teaching effectiveness while in the case of rural males and urban females, it was significantly and positively correlated with teaching effectiveness. (iv) In the case of rural males/females and urban females, teaching effectiveness was not significantly correlated with any of the personal factors. Among urban males, teaching effectiveness was significantly and positively correlated with age and experience and negatively with income. (v) In the case of rural males, teaching effectiveness was not significantly correlated with any of the fifteen psychological needs. Regarding rural females, teaching experience was positively correlated with n-affiliation and negatively with n-autonomy. With regard to urban males, teaching experience was significantly and positively correlated with n-affiliation and negatively with n-achievement; in the case of urban females, it was significantly and positively correlated with n-change and n-endurance and negatively with n-exhibition and n-heterosexuality. (vi) Teaching experience, in rural males, was positively and significantly correlated with job involvement (personal and situational) while there

was no significant correlation in the case of rural females and urban males but in the case of urban females, they were positively and significantly related (personal). (vii) In the case of rural males and females, urban males and females, and rural and urban females, there existed significant difference between the groups on job involvement (personal, situational as well as total); in the case of rural and urban males, there existed no significant difference between the two groups on situational and total job involvement but significant difference existed on personal job involvement. (viii) There existed significant differences between rural males and females, urban males and females, rural and urban females, and rural and urban males on teaching effectiveness. (ix) In the case of rural males and females, urban males and females, rural and urban females, and urban and rural males, there existed no difference between the groups on all the personal factors as related to job involvement. (x) Among rural males and females there was no difference between the two groups on all the psychological needs as related to job involvement; in the case of urban males and females there was no difference between the two groups on all the psychological needs in relation to job involvement excepting n-order and n-aggression. With regard to rural and urban females, no difference existed between the two groups on all the psychological needs except n-endurance in relation to job involvement while in rural and urban males there was no difference on all the needs as related to job involvement, excepting n-dominance. (xi) In the case of rural males and females, and rural and urban females, there existed significant differences between the groups on teaching effectiveness with regard to job involvement while in the case of urban male and females, and rural and urban males there was no difference. (xii) In rural and urban males no difference existed between the two groups on any of the fifteen psychological needs in relation to teaching effectiveness. (xiii) In the case of rural male group, rural female group, urban male group and urban female group, no significant difference existed on teaching effectiveness.

1161. JALEEL, S.S. and PILLAY, G.S., *Bureaucratism of College Teachers and Their Attitude towards Teaching Profession*, Dept. of Edu., MKU, 1979

The major objectives of the inquiry were: (i) to analyse the attitude of college teachers towards teaching with respect to age and professional experience, (ii) to

analyse the bureaucratism of college teachers with respect to age and professional experience, and (iii) to find the relationship between the attitude of college teachers towards teaching and their bureaucratism.

The tools used were Gordon's Work Environment Preference Schedule (WEPS) consisting of twenty-four items relating to self-subordination, unpersonalization, rule conformity and traditionalism, and Ahluwalia's Teacher Attitude Inventory. The sample comprised twenty-seven college teachers from twenty-one different colleges. Descriptive statistics and product moment coefficient of correlation were used for data analysis.

The major findings of the inquiry were: (i) Nearly two-thirds of the college teachers in the sample were highly bureaucratic. (ii) The age and experience of college teachers appeared to have definite positive relationship with their attitude towards the teaching profession. As teachers grew in age and experience their attitude towards the teaching profession grew more favourable. (iii) Bureaucratism was negatively correlated with age and experience. (iv) Bureaucratism as an aspect of personality was related to the attitude of college teachers towards the teaching profession. (v) The teachers who had developed sound attitude towards the teaching profession were relatively more traditional and impersonal.

1162. JANGIRA, N.K., *A Study of Social Cohesion in Elementary Teacher Training Institutions and Its Relationship with Their Efficiency*, Dept. of Teacher Education, NCERT, 1982

The objectives of the investigation were: (i) to study social cohesion obtaining in the elementary teacher training institutions, (ii) to study the relationship between the sets of social cohesion scores and the sets of student-teachers' mean scores on achievement, attitudes and adjustment, (iii) to compare student-teachers' mean scores on achievement, attitudes and adjustment in elementary teacher training institutions with high and low social cohesion, and (iv) to predict student-teachers' achievement in theory and practice of teaching from the social cohesion scores and the scores on attitudes and adjustment. The student-teachers' outcomes were taken as measures of institutional efficiency.

The study involved thirty-three elementary teacher training institutions drawn randomly from 185 institutions in the State of Uttar Pradesh. These institutions had 243 teacher-educators and 825 final year student-teachers. The Social Cohesion Assessment Inventory (SCAI) developed in the Department of Teacher Edu-

cation at the NCERT, student teacher adjustment inventory (STAI) and student teacher attitude to institution developed by Roma Dutt, and Ahluwalia Teacher Attitude Inventory were used to collect data. Correlations were computed to study the relationship between different variables. The t-test was employed to compare product variables in institutions with high and low social cohesion. Step-wise regression analysis was used for the prediction of student-teachers' achievement.

The main findings of the investigation were: (i) Social cohesion had significant correlation with the student-teachers' achievement in theory as well as practice. (ii) Its correlations with the student-teachers' adjustment and attitudes were not significant. (iii) Social cohesion in the teacher training institutions turned out to be a predictor of student-teachers' achievement in practice teaching explaining 48.23 per cent of the variance. (iv) It was a comparatively weak predictor of student-teachers' achievement in theory explaining merely 11.69 per cent of the variance in achievement. (v) Student-teachers' achievement in theory in institutions with high and low social cohesion differed significantly. (vi) Student-teachers' attitude to teachers (teacher-educators in this case) differed significantly in institutions with high and low social cohesion.

***1163.** JANGIRA, N.K., MATTOO, B.K. and SINGH, A., *Use of Microteaching for Improving General Teaching Competence of In-service Teachers — a Field Experiment*, Dept. of Teacher Education, NCERT, 1980

The specific objectives of the study covered (i) the study of the effectiveness of microteaching techniques in the improvement of the competence to use the skills of probing, reinforcement, stimulus variation, illustrating with example and increasing pupils' participation in the classroom teaching by in-service social studies teachers teaching Grade VII, and (ii) the study of the effectiveness of the training in teaching skill on the general teaching competence of these teachers.

Nineteen teachers teaching social studies to Grade VII were selected in consultation with the principals of secondary schools under Delhi Administration. Only those teachers who were willing to permit observation were selected. The study followed a pretest-posttest single group design. Retention of the gains in skill and teaching competence was also studied by taking post-raining observation eight weeks after posttest I. The Baroda General Teaching Competence Scale (BGTCS)

and Skill Competence Scales were used to measure general teaching competence and skill competence of the teachers. Two lessons of each of the teachers on three occasions (pretest, posttest I and posttest II) were observed by a pair of observers, one from the NCERT and the other from the SIE, Delhi.

The findings of the study were: (i) The group of nineteen in-service social studies teachers included in the study showed significant gain in the mean scores on the competence to use the five teaching skills, namely, reinforcement, probing, stimulus variation, illustrating with example and increasing pupils' participation after their training using microteaching. (ii) The teachers showed significant gain in the main scores on general teaching competence after their training in teaching skills using microteaching. (iii) The teachers had retained the gains on skill as well as on teaching competence eight weeks after the training. (iv) Microteaching of the individual teacher profile of skill and general teaching competence revealed improvement in all the teachers except one.

1164. JANGIRA, N.K. and DHOUNDIYAL, N.C., *Effect of Classroom Behaviour Training (CBT) on the Classroom Questioning Behaviour of Teachers*, NCERT, New Delhi, 1981a

The specific objectives of the investigation were: (i) to design classroom behaviour training (CBT) based on systematic feedback following interaction analysis approach, (ii) to design classroom questioning behaviour observation system (CQBOS) for providing feedback with a view to modifying the questioning behaviour of teachers, and (iii) to study the effectiveness of classroom behaviour training (CBT) in modifying the classroom questioning behaviour of teachers.

The effectiveness of the CBT was assessed through an experimental study. A pretest-posttest and control group-experimental group design was adopted for the experiment. The sample for the study included twenty teachers selected, with the help of the District Education Officer, from schools located in Rohtak in Haryana. Selections were made taking into account their age and qualifications. A twenty-hour training programme was given to the observers who were to observe these teachers using the CQBOS. Scotts' coefficient of agreement was used to compute the inter-observer reliability, which ranged from 0.76 to 0.81. Intra-observer reliability ranged between 0.71 and 0.87.

The main outcomes and findings of the investigation were: (i) The CBT developed under the study consisted

of seven units of instructional material. It involved the teachers actively in assignments and discussions. Demonstration lessons incorporating the desired behaviours and also practice lessons in simulated conditions formed part of the training. (ii) The CQBOS designed under the study consisted of six dimensions, viz., question function, structural characteristics, delivery, distribution, pupil's responses, and management of pupil's response. (iii) Significant difference between the two groups was observed in the incidence of classroom questions after the CBT, implying that the CBT helped in increasing the incidence of classroom questions in the experimental group. (iv) The CBT helped in reducing the use of lower order questions and increasing the use of middle and higher order questions in the experimental group. (v) In respect of structural characteristics of questions, it was found that the teachers improved the quality of questions they used in the classroom after undergoing the CBT. (vi) After the CBT, the experimental group showed significant improvement with respect to two question delivery behaviours, namely, pause and voice; however, in respect of speed of delivery the improvement was not significant. (vii) Regarding the question distribution behaviour, the two groups differed significantly in their mean gain, again indicating that the CBT had a positive effect on the experimental group. (viii) Pupils' response patterns for the teachers in the experimental group underwent considerable change after the CBT and also differed significantly from those of control group teachers. (ix) The CBT helped in modifying the pupils' response management behaviour of the teachers; the two groups of the teachers differed significantly after the CBT on different components of the pupils' response management behaviour.

1165. JANGIRA, N.K. and DHOUNDIYAL, N.C., *Structural Characteristics of Classroom Questions, Pupil Responses and Pupil Response Management Behaviour of Social Studies Teachers*, Dept. of Teacher Education, NCERT, New Delhi, 1981b

The specific objectives of the investigation were: (i) to study the incidence of classroom questions in social studies lessons of Grade VII, (ii) to study the different levels of classroom questions used in social studies lessons, (iii) to study the structural characteristics and quality of classroom questions in social studies, (iv) to study the types of pupils' responses solicited by the classroom questions, (v) to study the pupils' responses in the con-

text of the structural qualities of the questions, (vi) to study the management of pupils' responses in the social studies lessons, and (vii) to study the response management in the context of the type of responses received from pupils.

The sample for the study comprised twenty-five social studies teachers of Delhi and Haryana schools who were willing to allow taperecording of their lessons. One lesson of thirty-five minutes each was taperecorded for analysis. Classroom Questioning Behaviour Analysis System (CQBAS), developed by the investigators, was used for analysing the lessons. An inter-coder reliability of 0.86 was achieved for coding the 18 categories included in the CQBAS. Intra-coder reliability was found to vary from 0.78 to 0.88. Data were analysed largely in terms of percentages and the chi-square test was used to study the hypotheses concerning association between different sets of variables involved.

The main findings of the investigation were: (i) The incidence of classroom questions in social studies lessons under study was quite high. On an average, twenty-nine questions were asked in a lesson of thirty-five minutes' duration. (ii) Most of the questions asked in the social studies classroom were at memory level. The incidence of questions at levels higher than memory did not come to even one per lesson. (iii) The length of questions asked in the social studies classroom varied from four to thirty-four words. Most of them (about 86 per cent) comprised fourteen words or less. In other words, only a few lengthy questions were asked. (iv) The structural characteristics of the questions used in the social studies classrooms appeared to be related to the type of pupils' responses they elicited. (v) The type of pupils' responses were related to the response management behaviour of the teachers.

- 1166.** JANGIRA, N.K., SINGH, A. and MATTOO, B.K., *Effect of Training in Teaching Skills through Microteaching on the Skill Competence and General Teaching Competence of In-service Science Teachers and Pupil Perceptions of Teaching*, Dept. of Teacher Education, NCERT, New Delhi, 1981

The specific objectives of the investigation were: (i) to study the effect of training using the microteaching technique on the competence of science teachers to use the skills of reinforcement, probing, stimulus variation, illustrating with examples, and increasing pupils' participation, (ii) to study the effect of training in the five

teaching skills mentioned above using the microteaching technique on the general teaching competence of in-service science teachers, and (iii) to study the changes in pupils' perception of teaching of their respective teachers after training in the five teaching skills.

The sample for the study consisted of eighteen science teachers teaching Standard IX in Gurgaon and Sohna blocks of Haryana. Eleven of the teachers were male and seven female; all of them were B.Sc. and B.Ed. This was an experimental study adopting pretest-posttest single group design. The tools used were Teaching Assessment Battery for assessing the teaching competence of in-service science teachers, Teacher Behaviour Occurrence Schedule to provide feedback to the trainees undergoing practice to attain mastery over the skills and Teacher Behaviour Rating Scale to provide feedback regarding the adequacy and appropriateness of behaviours occurring under a skill. Data regarding perceptions of pupils in respect of pretraining-posttraining teaching of their respective teachers were collected using a specially designed inventory.

The main findings of the investigation were: (i) The means of the teachers' scores on the competence to use the skills of probing questioning, reinforcement, stimulus variation, illustrating with examples, and increasing pupils' participation, as well as the gains in the teachers' scores on general teaching competence before and after training in teaching skills using microteaching differed significantly at 0.01 level. Thus, it implied that training in teaching skills using the microteaching technique brought about significant improvement in teaching skill competence and general teaching competence of science teachers. (ii) Pupils' perception of the teaching of their respective teachers after training in teaching skills underwent a significant change in the desired direction. It, thereby, confirmed the finding about the effectiveness of training in teaching skills through microteaching.

- 1167.** JOB, A.M., *A Study of the Relationship between Socio-economic Status and the Role Perception of Secondary School Teachers in Poona District*, Ph.D. Edu., Poona U., 1976

This was a factual and comprehensive survey of the status and role of teachers in Poona district undertaken with the purpose of finding out whether any special relationship existed between the teacher's role perception and his socio-economic status.

The tool used for data collection was a questionnaire

of closed and open form type. The population covered in the study consisted of 336 secondary schools of Poona district with 5,252 teachers. The sample comprised 856 teachers randomly selected. Out of the total number of teachers, 63 per cent responded to the questionnaire. Chi-square test was used for the analysis of the data.

The major findings of the study were: (i) Considering education, seven items having a significant bearing on the role perception of the teachers were the goals of secondary education, satisfying factors in the teaching profession, functions of secondary teachers, methods of teaching, personal qualities, teaching ability, and methods of discipline. (ii) Taking into consideration a teacher's experience, a good relationship between experience and role perception was observed in the context of handling discipline problems, organizing ability and methods of discipline. (iii) The relationship of socio-economic status of the teacher with his role perception was highly significant with reference to the goals of secondary education, factors in choosing the teaching profession, satisfying factors in the teaching profession, functions of secondary teachers, teaching methods, organizing ability, teaching ability, dealing with classroom discipline problems, methods of discipline and special attention given to outstanding pupils. (iv) So far as urban-rural background was concerned, the relationship was highly significant in the choice of the teaching profession, teaching methods, teaching ability, organizing ability, solving difficulties of pupils in studies, and satisfying factors in the teaching profession.

1168. JOSEPHINE, M., *A Critical Study of the Communication Patterns adopted by the Colleges of Education*, Ph.D. Edu., MSU, 1978

The objectives of the investigation were: (i) to study the distortion, if any, in the communication between the colleges of education and the practising schools, (ii) to study the source, message, channel and receiver variables as perceived by the staff in the colleges of education and by the teachers in the practising schools and to relate these perceptions to the effectiveness of the communication, (iii) to analyse the barriers to communication between the colleges of education and their practising schools, (iv) to describe the nature of an effective feedback system between schools and colleges based on the findings of the study, and (v) to evolve a working model of communication based on this operational survey.

The study was confined to Madras and Annamalai University areas. The sample consisted of all the training

colleges from these two university areas. Out of two hundred schools situated in the area, 50 per cent of the schools were selected randomly for the study. Data were collected by the researcher using three tools, viz., Measurement of Innovativeness of the School, Measurement of Communication Pattern and Study of Barrier to Communication. The data were analysed by percentages, t-test and chi-square test.

The major findings of the investigation were: (i) There was agreement relating to innovativeness of the schools between the college teachers and the school teachers. (ii) Except in the case of teacher-centred methods and co-curricular activities, there was no difference in distortion in communication between the colleges of education and their practising schools. (iii) There was agreement between the colleges of education and their practising schools regarding the barriers to communication. (iv) The study of source, message and receiver variables revealed high distortion indicating that there was no proper system of communication between the colleges of education and their practising schools.

1169. KOLTE, N.V., *Job Satisfaction of Primary School Teachers: a Test of the Generality of the Two Factor Theory*, National Institute of Rural Development, Hyderabad, 1978

The study was undertaken (i) to identify the factors that are responsible for both the teacher's satisfaction and dissatisfaction, and (ii) to test the validity of Herzberg's two factor theory of job satisfaction. The hypotheses were: (i) The intrinsic and extrinsic factors were unipolar in nature, that is, the intrinsic factors caused feelings of satisfaction and did not cause feelings of dissatisfaction. (ii) The extrinsic factors caused feelings of dissatisfaction but not feelings of satisfaction.

The sample consisted of six panchayat samitis in Buldana district of Maharashtra. These samitis were selected by systematic sampling. From each of the selected panchayat samitis, three primary schools were selected at random. All the teachers of these schools formed the respondents for the study. A questionnaire, in Marathi, was mailed to all the respondents. They were asked to describe one incident when they felt exceptionally good about their job and another when they felt exceptionally bad about it. In all, seventy-eight incidents about good feelings and seventy incidents about bad feelings about the job were collected. The cause of either good or bad feelings was found out by content analysis of incidents and percentages were calculated on the basis of the total number of incidents of each type.

The study yielded the following findings: (i) Achievement was responsible for the feelings of satisfaction in about forty-two of the collected satisfaction incidents. (ii) Thirty good incidents revealed recognition as a factor for the feeling of satisfaction from the job. (iii) Advancement emerged as a satisfier in eighteen of the incidents collected in connection with the feelings of satisfaction. (iv) Work itself was found to be responsible for satisfaction in six of the good work incidents. (v) Policy and administration was cited as a satisfier in incidents where both husband and wife were teachers and were posted at the same place. (vi) Unfair policy and administration emerged as a dissatisfier in thirty-five of the dissatisfaction incidents. (vii) Working conditions were cited as the cause of dissatisfaction in twenty-five of the bad work incidents. (viii) Salary was mentioned as a dissatisfier in ten of the bad work incidents. (ix) Interpersonal relations emerged as a dissatisfier in ten of the incidents that described the feeling of dissatisfaction with the job. (x) Advancement emerged as a dissatisfier in five of the bad work incidents. (xi) Herzberg's dual factor theory was not supported, in toto, by the study.

1170. KOUL, L., *Factorial Study of the Differentiating Values of Popular Teachers*, Kur. U., 1974 (UGC-financed)

The study was undertaken with the specific purpose of finding out the common factors from the six values, viz., theoretical, social, political, religious, economic and aesthetic, which differentiated popular and non-popular teachers.

A popular teacher was defined as the one who was liked by at least 80 per cent of the group. From thirty-one randomly selected secondary schools 11,090 students wrote the names of five teachers whom they liked the most. Thus a list of 204 teachers was prepared from which 200 teachers were included in the sample. The tool used was the study of values (Allport *et al.*) as modified by Ray Chowdhury. The centroid method of Thurstone was used for the factorial analysis of the correlation matrix, with oblique rotation by radial method.

The major findings of the study were: (i) Four factors were identified through factor analysis. (ii) Factor I had a high positive loading of 0.70 in the test assessing the theoretical value and also a fairly high negative loading in the test assessing the aesthetic value. The factor was called the Theoretical Factor. (iii) Factor II had a high positive loading in the test measuring the aesthetic value and a high negative loading in the test assessing the

economic value. It was named Aesthetic Factor. (iv) Factor III had a high positive loading in the tests assessing the political and religious values. This was called the Ethical Factor. (v) Factor IV had a high positive loading in the test assessing the economic value and a high negative loading in the test assessing the aesthetic value. It was called the Economic Factor. (vi) The popular teachers scored significantly less in the economic and aesthetic values and more in the theoretical, social, political and religious values than the unpopular ones.

1171. KUMAR, K., *Motivation of B.Ed. Correspondence Course Students*, Educational Psychology Unit, NCERT, 1981

The objectives of the investigation were to find out (i) the motivation of the group selected for taking up the Summer School cum Correspondence Course (SSCCC) programme, (ii) the immediate and long-term goals of the selected group after obtaining the B.Ed. degree, and (iii) the perceptions of the group regarding the operation of different course inputs.

The study was limited to the students (in-service school teachers) of the NCERT course. All those who had completed the course requirements and who could respond to the questionnaire and inventories in English, were included. The checklist included several aspects like regularity in receiving the lessons, difficulty encountered in understanding the lessons, the academic quality of the lessons received, the number of assignments in each paper, time provided to complete assignments, guidance and facilities for practice teaching and evaluation procedures adopted in the course. In addition, achievement motivation and the attitude of SSCCC students towards correspondence education were analysed for males and females, separately, and were compared with those of the students of the full-time B.Ed. programme.

The findings of the investigation were: (i) The expressed considerations for taking up a teaching career were the nobility of the profession and service to mankind, closely followed by a means of earning a livelihood, while the males cited interest in it, liking for it and an ambition. Among the females the three most popular reasons remained the same though their order changed. (ii) The three most common reasons for doing B.Ed. through the correspondence course were: it was financially more suitable for in-service teachers, it improved professional competence and it qualified one for promotion. (iii) Analysis of immediate life goals revealed that the desire to become a better teacher was the most com-

mon reason while writing books was the least popular goal; most of the males claimed the same while among the females pursuing higher studies ranked first. (iv) Quantitative assessment of the achievement motivation of the SSCCC and regular B.Ed. students did not indicate any significant differences. (v) The SSCCC group registered a higher mean score attitude towards education. (vi) The students of the RCEs at Bhopal, Bhubaneswar and Mysore were more critical about the syllabus and curriculum; the syllabus was considered too lengthy and theoretical. The majority of the students suggested that the teaching practice be eliminated or drastically reduced in view of their experience in teaching. (vii) The students at Bhopal were not satisfied with the manner in which the courses on teaching methods were dealt with and suggested that more attention be paid to it. (viii) Some students of the SSCCC at Bhopal and Mysore felt that the regular RCE staff should teach in the summer programme. (ix) One-third of the total students faced difficulty in understanding the lectures due to the medium of instruction, the use of difficult words, non-availability of teachers to clarify doubts, etc. (x) About 50 per cent students felt that the lectures were poorly organized. (xi) Three-fourths of the Ajmer students felt that instructions during the course were inadequate for working out assignments. (xii) Two-thirds of the sampled student were satisfied with the evaluation system for assessing the assignments. (xiii) Three-fourths of the students were eager to form a study circle to resolve their academic problems. (xiv) A few students suggested the introduction of an M.Ed. programme through correspondence, the organization of refresher courses for in-service teachers, provision of study leave for the programme, etc.

***1172.** KUSHWAHA, P.L., *An Investigation into the Attitudes and Role Perceptions of Secondary Teachers*, Ph.D. Edu., Raj. U., 1979

The objectives of the study were: (i) to measure the attitudes of secondary school teachers towards children and school work, (ii) to collect teachers' personal data regarding their academic qualifications, sex, teaching experience and subjects taught, (iii) to construct a questionnaire for determining their role perceptions, and (iv) to find out the relationship between their attitudes and five types of role perceptions.

The sample consisted of 600 trained graduate/post-graduate teachers (398 male and 202 female) teaching humanities and sciences to the secondary classes in the

secondary and higher secondary schools of Ajmer, Jaipur and Tonk districts of Rajasthan. The tools used were Quality Point of Teachers, Teaching Experience, Minnesota Teacher Attitude Inventory and Teachers' Role Perception Inventory. The investigator prepared a list of social situations and problems teachers had to face regarding their pupils and some actions they usually performed to solve those problems. Based on the comments of a hundred educationists and social scientists a preliminary form of the inventory was compiled for the try-out. The inventory was administered to a hundred teachers selected at random from the higher secondary schools of Jaipur. The final form of the inventory had twenty-five problems or situations. Frequency polygons, ogives, coefficient of correlation and t-test were used to analyse the data.

The findings of the study were: (i) Teachers' quality was inversely related to the referrer role. (ii) Teachers' quality point was inversely related to the disciplinarian role. (iii) There was no relationship between teaching experience and the motivator role. (iv) There was no discrimination between teachers with high or low experience in their perception of the counsellor role. (v) Teachers' attitude was inversely related to the adviser role, referrer role, motivator role, and disciplinarian role. (vi) The high quality point group chose the referrer role more often and more consistently than the medium quality point group. (vii) The quality point did not seem to affect the teachers' perception of their role. (viii) The high, medium and low experience groups of teachers did not mutually differ from one another in their perception of any of the five types of roles. The length of teaching experience was not a factor influencing the teachers' role perception. (ix) There were no significant differences among the high, medium and low attitude groups on the roles of the motivator and the counsellor. (x) The male teachers were better than the female teachers on adviser and disciplinarian roles. The female teachers were better than the male teachers on the motivator and counsellor roles. (xi) Science teachers were superior to arts teachers in respect of referrer, motivator and disciplinarian roles. Both arts and science teachers were the same in respect of adviser and counsellor roles.

1173. LAKDAWALA, U.T., *The Professional Growth of Women Teachers of Secondary Schools of Greater Bombay*, SNTD, Bombay, 1977

The main objectives of the study were: (i) to assess the professional growth of trained graduate women teachers

having at least five years' experience of teaching, (ii) to find out their in-service training needs, (iii) to assess their contribution to the profession, (iv) to find out their difficulties in achieving professional growth, and (v) to find out their job satisfaction.

In order to get a proper representation of the population of trained graduates having at least five years' teaching experience the schools were classified according to the medium of instruction and the postal area in which they were located. In all, ninety-one schools constituting 15 per cent of all the schools were selected on a random stratified basis. Final data were obtained from 375 teachers working in these selected schools. The instruments used consisted of a questionnaire and a self-evaluation form both to be filled in by the teacher-respondents.

The main findings of the study were: (i) There was a striking difference between the earlier specializations of the teachers and the subjects they had to teach like English, history and geography. (ii) More than 75 per cent teachers had to take more than thirty periods per week; about 65 per cent teachers spent more than an hour a day for correction work; and about 53 per cent spent more than an hour a day in the preparation for teaching. (iii) There was not a single activity leading to professional growth performed by 50 per cent or more of the teachers; the activity of attending courses attracted the highest number of teachers and research work attracted the lowest number of teachers. (iv) More than 25 per cent teachers implemented new techniques in the classroom teaching; the three most frequently used techniques were: using audio-visual aids, individualized instruction, and group discussion. (v) Excepting the activity of becoming a member of professional associations, in all other professional activities the proportion of unmarried teachers was higher than that of married ones. (vi) According to the teachers, the reasons responsible for not doing any writing work contributing to the professional growth were lack of time due to the routine work of the school, lack of time due to the demanding home atmosphere and exhausting school work. (vii) Three main reasons for not attending courses leading to the professional growth were want of opportunities, lack of knowledge of such courses and unwillingness to sacrifice vacation. (viii) Only 41 per cent teachers were fully satisfied with their jobs. The reasons for dissatisfaction were mostly the crowded classes and the heavy workload. (ix) By and large, all the teachers were aware of the need to grow professionally, but they perceived shortage of time and lack of incentives as the main barriers for their growth.

1174. LAKSHMIKUTTY AMMA, T.S., *The Role Expectations of Teachers*, Ph.D. Edu., Ker. U., 1978

The major objectives of the study were: (i) to list the major roles expected of teachers as viewed by teachers, parents and students, (ii) to evolve a teacher role scale which had the concurrence of these groups, and (iii) to get an idea about the curricular and co-curricular aspects of the secondary school programmes and the part played by the teachers.

The study was limited to four districts of Kerala, drawn from the southern part of the State. The sample for the study consisted of 504 secondary school teachers, 100 student representatives, 100 parents and some headmasters. A questionnaire was the main tool.

The major findings of the study were: (i) Some of the major roles expected of teachers were: they should try to eliminate illiteracy, they should be thorough in the subject matter, they should co-operate with the headmaster and the staff in maintaining discipline, they should treat the pupils kindly, they should not be political workers, they should be social agents, they should mould the character of the pupils, they should visit the families of problem children, they should work for the communal harmony and they should keep close contact with the parents. (ii) There was high positive correlation between the role expectations of teachers as viewed by the students and the teachers and by the parents and the students. (iii) There was high positive correlation between the role expectations of teachers as viewed by the teachers and the parents. (iv) The teachers, in general, were not in favour of indulging in political activities. (v) The majority of the teachers did not like to work as scout masters. (vi) The aided school teachers and the male teachers were more interested in tackling teachers' union problems than the government school teachers and the female teachers. (vii) The urban teachers showed more concern for the student union problems than the rural teachers. (viii) The aided school teachers were more interested in having excursions and study tours as part of their expected role.

1175. MAMA, K., *A Study of the Impact of In-service Education on Teachers in the State of Maharashtra*, Ph.D. Edu., Bom. U., 1980

The main objectives of the study were: (i) to find out the number, media and kind of in-service programmes in Maharashtra, (ii) to examine the concept of in-service education, (iii) to find out the academic and recreational

reading habits of teachers, (iv) to find out the opinion of teachers on in-service programmes, (v) to examine the facilities offered to teachers to attend in-service education programmes, and (vi) to find out the nature of attendance at in-service programmes.

The study was limited to the in-service education of secondary school teachers in Maharashtra. The survey method was used for the study. The tools used for data collection were questionnaires prepared for the principals of colleges of education and the principals and teachers of secondary schools and an interview schedule for experts in education and principals and teachers of secondary schools. A pilot study was conducted on a sample of sixty-five teachers selected from one teacher training college and six secondary schools in Bombay. The final sample included fifty principals of colleges of education, 5 per cent of the principals of secondary schools and 50 per cent of the teachers in each of the selected schools.

The main findings of the study were: (i) Of the fifty-one teacher education colleges in the State, twenty-six ran extension centres. (ii) Little importance was attached to in-service education. (iii) The colleges of education conducted a variety of programmes, most of which dealt with subject matter, planning of tests, evaluation and audio-visual aids. (iv) No effort was made to involve teachers in the planning, evaluation and follow-up of in-service programmes. (v) The school teachers had no access to the college libraries except while participating in in-service programmes. (vi) In-service programmes were run as weekend courses. (vii) Adequate communication did not exist between the colleges of education and the secondary schools. (viii) Control of in-service programmes was in the hands of the school principals. (ix) The teachers were sometimes prevented from attending in-service programmes by the principals. (x) The concept of in-service education was not clear to the teachers.

1176. MANGAL, S.K., *Analysis of Common Factors in Teacher Adjustment*, Ph.D. Edu., Kur. U., 1979

The main objectives of the study were: (i) to identify, through factor analysis, the fundamental dimensions or factors of teacher adjustment, and (ii) to devise a standardized teacher adjustment inventory based on the fundamental dimensions discovered through factor analysis.

The preliminary draft of the inventory consisted of 387 items belonging to arbitrarily decided twenty-one di-

mensions of teacher adjustment. Three response categories yes, no and uncertain, were provided against each item. This draft was administered to 200 randomly selected teachers of fourteen high schools of Hissar. Item analysis was carried out by three methods, namely, the method of upper and lower thirds, the method based on point biserial correlation, and the method based on face validity. After item analysis 253 items were retained for the second draft. It was administered to 400 teachers from forty-two high schools of four districts of Haryana. The responses were scored under twenty-one dimensions which were factor analysed and five factors were obtained. For the final form, 253 items and twenty-one dimensions were reshaped and re-arranged so as to yield scores for each factor. The final form was then standardized on a sample of 1,217 teachers working in 100 high schools of all the eleven districts of Haryana. Percentile norms were established for each of the five adjustment areas for the male and the female teachers, separately.

The findings of the study were: (i) Teachers' adjustment consisted of five factors. They were: adjustment with academic and general environment of the institution, socio-psycho-physical adjustment, professional relationship adjustment, personal life adjustment and financial adjustment and job satisfaction. (ii) The test-retest reliability and split-half reliability for each factor ranged between 0.97 and 0.99, and between 0.94 and 0.99, respectively. (iii) The criterion related validity against the Bell's Adjustment Inventory and the ratings of the teachers by the headmasters came out to be 0.967 and 0.986, respectively.

1177. MANI, G. and GONSALVES, C., *A Study of the Self-concept of Student-teachers in relation to Their Performance in Practical Teaching*, Stella Matutina College of Education, Madras, 1977

The major aim of the study was to identify the relationship between the students' reaching performance and the self-concept, keeping in view the background variables of previous academic achievement, age, socio-economic background and previous teaching experience.

The sample comprised 100 students undergoing B. Ed. training at the Stella Matutina College of Education during 1976-77. The tool used was a self-concept inventory specially developed for the study. Product moment coefficient of correlation was used for data analysis.

The major findings of the study were: (i) Teachers with more teaching experience had better self-concept

than teachers with less teaching experience. (ii) Teachers with better self-concept scored more on practice teaching than teachers with poor self-concept. (iii) Age had some influence on self-concept. Lower age was accompanied by better self-concept and more effective teaching. (iv) Socio-economic background had a clear influence on self-concept and consequently on teaching effectiveness. In the case of teachers in the upper socio-economic status the correlation between self-concept and teaching practice scores was more than that in the case of middle socio-economic status group. (v) The relationship between self-concept and teaching practice scores in general was not significant.

1178. MANN, S.S., *Some Correlates of Success in Teaching of Secondary School Teachers*, Ph.D., Edu., Punjabi U., 1980

The major objectives of the study were: (i) to find out the concept of administrators, teachers, teacher-educators and students of success in teaching, (ii) to construct a scale to assess the success in teaching of secondary school teachers teaching science, mathematics and social sciences to Classes IX, X and XI, (iii) to identify successful and unsuccessful teachers, (iv) to differentiate the personality traits of successful teachers from those of unsuccessful teachers, (v) to compare the academic achievement and achievement in professional courses of successful and unsuccessful teachers, and (vi) to compare the attitude of successful and unsuccessful teachers towards the teaching profession, classroom teaching, child-centred practices, educational process, pupils and teachers.

The study was conducted on 1,800 male and female teachers working in high/higher secondary schools of Punjab. To collect data two sets of tools were used. The first set of tools consisted of the 16 PF Test, Teacher Attitude Inventory (TAI) along with academic achievement scores of teachers, the achievement scores of teachers in professional courses and teaching experience of teachers in number of years of service. The second set of tools consisted of a scale to measure teaching success. The scale had different items on different aspects like professional skills, personal qualities and social skills. The scale was rated by heads of schools, colleagues and students.

The results revealed: (i) The personality factors A, B, C, G, H, N and Q₃ had significant positive relationship to teaching success and factors F, I, O and Q₄ had negative relationship. (ii) The personality factor of suc-

cessful and unsuccessful teachers differed with respect to eleven factors. The successful teachers were significantly more expressive, ready to cooperate, attentive to people, generous in personal relations, bright and alert, fast in learning, efficient in abstract thinking, emotionally mature, realistic about life, effective in adjustment, dependable conscientious, persevering, responsible and dominated by sense of duty, socially aware, spontaneous and abundant in emotional responses, practically independent, polished, experienced and analytical and less tense than unsuccessful teachers. (iii) The relationship between attitude of teachers towards the teaching profession, classroom teaching, child-centred practices, educational process and success in teaching was significant. The successful teachers had more healthy attitude towards the teaching profession and allied aspects than the unsuccessful teachers. (iv) Both academic achievement and professional course achievement had positive relationship with teaching success. (v) Teaching experience was not related to success in teaching. (vi) There was significant difference in personality characteristics, attitudes towards the teaching profession and allied aspects, academic achievement and achievement in professional courses of successful and unsuccessful teachers. (vii) Personality characteristics, attitude towards the teaching profession and allied aspects, academic achievement and achievement in professional courses were determinants of success in teaching.

1179. MARKER, N.S., *Survey of Teacher Education in the State of Maharashtra*, Ph.D. Edu., Bom. U., 1975

The aim of the study was to survey teacher education in the six universities of Maharashtra and trace the development of teacher education in ancient India, in the communist countries, and in the U.S.A., the U.K. and Thailand. The study was limited to the field of teacher education at the secondary level only during the period 1947 to 1973.

The survey method was employed, and the tools of inquiry used were an opinionnaire, a questionnaire, records, reports and documents, visits to colleges, and interviews with experts, officials and principals of colleges.

The major findings of the study were: (i) There was substantial increase in the colleges of education since Independence. (ii) Fourfold and sixfold increase, respectively, took place in the number of secondary schools and students in secondary schools between 1949 and

1971. (iii) Increase in the number of trained teachers was more marked than that of untrained teachers. (iv) There was an upward trend in the expenditure on colleges of education in the various five-year plans. (v) There was no long-term plan of development of teacher education by the Department of Education. (vi) Physical resource development predominated human resource development in teacher education. (vii) Dyarchy in the administration of colleges of education was a source of dissatisfaction. (viii) The state-level institutions set up for pre-service and in-service education were generally outdated and lacked sufficient accommodation. (ix) All the six universities in Maharashtra offered a general bachelor of education course. (x) The B.Ed. syllabi were revised infrequently. (xi) Policy decisions were processed through the Deputy Director of Education in charge of Teacher Education for Maharashtra. (xii) Students were dissatisfied with the teaching in B.Ed. and evaluation as there was no significant improvement in the quality of teacher education at the secondary level. (xiii) There was a tremendous increase in the number of students admitted to the colleges of education. (xiv) The four divisions of Maharashtra, namely, Bombay, Poona, Nagpur and Aurangabad, held the same position with regard to the percentage of trained teachers in each division over the period 1960-61 to 1970-71.

1180. MATHUR, V.R., *Mobility Patterns and Professional Commitment of Higher Secondary School Women Teachers of Delhi*, Ph.D. Edu., Agra U., 1981

The study was based on the following hypotheses: (i) The place of work is a significant condition of work for women teachers. (ii) There is a correlation between mobility and professional commitment. (iii) Mobility is positively correlated with professional commitment. (iv) There is an optimum mobility quotient which is conducive to professional commitment of women teachers.

The universe of the research was higher secondary women teachers in the girls or co-educational schools of Delhi. Following the stratified random sampling technique, four types of schools were selected on the basis of management which were further classified into the rural and the urban. The teachers' responses could be obtained from twenty-six schools only. A total of 390 questionnaires were distributed, of which 263 completed questionnaires were obtained. The tools used were a questionnaire, interview schedules, case histories of most committed teachers and researcher's diary.

The major findings of the study were: (i) There were nine distinct patterns of mobility, viz., upward inter-professional mobility, upward mobility from other state, city or village schools to Delhi schools, upward mobility within Delhi schools, upward mobility within the same school, downward mobility from other state, city or village schools to Delhi schools, downward mobility within Delhi schools, horizontal mobility from other state, city or village schools to Delhi schools, horizontal mobility within Delhi schools and lack of mobility. (ii) There was a positive relationship between mobility and professional commitment. (iii) Normally, teachers did not like unnecessary transfers and changes of schools. A majority of mobility patterns were negatively correlated with professional commitments of women teachers, except for some personal reasons when teachers opted for a change of place, mobility had no negative influence. (iv) Upward mobility was positively related with professional commitment. (v) Upward mobility in the same school was most conducive to professional commitment. (vi) Lack of mobility was least conducive to professional commitment. (vii) Normally, women teachers disliked going to a rural school, specially if the distance between home and school was great or if there was no proper transport facility. (viii) Mid-term transfers were a big hindrance to professional commitment and were disliked by teachers, principals and students of the school. (ix) The optimum mobility quotient was the one where unnecessary displacements and transfers were avoided, transfers were made with due consideration to teachers' convenience, measures were taken to avoid lack of mobility and proper recognition and appreciation of work was given in the form of timely promotions, rewards and public recognition.

1181. MISHRA, G., *A Study of the Attitudes of Teachers Working in Government-aided Conventional Sanskrit Vidyalayas of Varanasi towards Teaching Profession (Varanasi nagarshit anudunit paramparagat Sanskrit vidyalayon ki adyapakon ki adhyapan vyawasay sambandhi abhiritiyon ka adhyayan)*, Ph.D. Edu., Samp. U., 1977

The main objectives of the investigation were: (i) to study the attitudes of the teachers working in conventional Sanskrit vidyalayas towards the teaching profession and its components, viz., classroom teaching, child-centred practices, teaching process, attitude towards students and attitude towards teachers, and (ii) to find out the impact of religion, caste, political affiliation,

age, sex, status of the institution, teaching experience, training, designation and responsibilities on the attitude towards teaching.

The study was conducted on all the male (234) and female (16) teachers working in fifty-three government-aided conventional Sanskrit vidyalayas from primary to postgraduate level situated in Varanasi. Six null hypotheses with respect to six attitudes were formulated. The study employed descriptive statistics and chi-square for analysing the data. The Teacher Attitude Inventory (Ahluwalia) was used.

The main conclusions of the investigation were: (i) The caste affected the attitude towards the teaching process. Shudras had significantly higher mean than Vaisnyas in attitude toward the teaching profession. (ii) Political party affiliation had significant influence on the attitude towards the teaching profession. (iii) There were sex difference in the attitude towards teaching, male teachers scoring significantly higher than female teachers. (iv) The institutional status influenced the attitude towards the teaching profession. The teachers in the postgraduate institutions had significantly more favourable attitude toward their profession than the teachers belonging to intermediate-level institutions; there were similar trends with regard to the attitude towards classroom teaching and students. (v) Teachers' training favourably influenced the attitude towards the teaching profession; similarly, teachers' training favourably affected the attitude towards classroom teaching and teaching process. (vi) The designation of teachers did not influence the attitude towards the teaching profession.

*1182. MOHAN, K., *Effectiveness of Teacher Training Programmes*, Ph.D. Edu., Avadh U., 1980

The investigation was designed to find out the effectiveness of the teacher training programmes in the colleges affiliated to Avadh University, Faizabad. The sample for the study included all the ten teacher training departments in the colleges affiliated to Avadh University. Data were collected with the help of questionnaires from forty-five secondary school teachers, 929 teacher-trainees, sixty-four teacher-educators, ten heads of the teacher training departments and two principals.

The findings of the study were: (i) The teacher training departments did not have adequate buildings or equipment. (ii) None of them had hostels for girl students. The hostel facilities for boys were not satisfactory. (iii) Quite a few teacher-educators were not

adequately qualified to supervise teaching practice in the subjects in which they were supervising the lessons. (iv) None of the teacher training departments had provision for extension services. (v) The process of admission was too lengthy and took more than two months for completion. (vi) The duration of the training course had become very short and covered only 118 working days. (vii) None of the training departments had their own practising schools. (viii) The time spent on practice-in-teaching was too short as schools were not available for a longer time. (ix) The examination for practice-in-teaching had become a farce as the examiners did not observe the lessons for adequate time. (x) The majority of the respondents were not satisfied with the efficiency of the training programmes.

1183. MUDDU, V., *A Study of the Problems of Secondary School Teachers of Nalgonda District in Teaching Biological Science*, Dept. of Edu., Osm. U., 1978 (UGC-financed)

The study was undertaken to find out the various problems that were actually faced by biology teachers at the secondary school level, and the factors which acted as impediments in the way of effective teaching.

The sample consisted of teachers who were teaching biology sciences, drawn from the thirty schools of Nalgonda district. The selected schools included private, government and aided schools having boys as well as girls. A questionnaire was prepared and administered to the teachers. Mean and percentage were employed to process the data.

The study yielded the following findings: (i) Most of the teachers were teaching other subjects besides biological sciences. A majority of the teachers had studied other subjects besides biological sciences. (ii) A majority of the teachers stated that they did not have adequate classroom facilities. Ninety-three per cent of the teachers stated that they did not have separate periods for practicals in biology. (iii) Most of the teachers were over-burdened with workload. In most of the schools, teachers were experiencing inadequate laboratory facilities. (iv) Film strips, insect cages, microscopes and physiological apparatus were not adequately available for biology teaching. Several teachers were of the opinion that the present textbooks were not effective for transmitting scientific knowledge. (v) Most of the schools in Nalgonda district were having poor library facilities. While 20 per cent of the schools received

general science periodicals, 73 per cent of the schools had no scientific journals or magazines and in 63 per cent of the schools, even general books on biology were not available for learners.

- 1184.** MUKHOPADHYAY, M., *Microteaching vs. Modular Approach: Comparative Effectiveness in Developing Teaching Competencies*, TTTI, Bhopal, 1981

The objectives of the investigation were: (i) to study the development of selected teaching competencies through microteaching and modular approaches, and (ii) to compare the effectiveness of microteaching and modular approaches in developing selected teaching competencies. It was hypothesized that there would be no significant difference in the performance of the groups trained through microteaching and modular approaches.

The study was conducted on twenty-four full-time teacher-trainees who had either a diploma in engineering or a B.Sc./M.Sc. degree. All the trainees had considerable amount of teaching experience. Using the random sampling technique, two groups were formed. A post-facto analysis carried out revealed the matching of the groups in terms of their qualification, age, experience and self-perceived teaching capability. The competencies selected for experimentation were: asking oral questions in the classroom and employing reinforcement techniques as teachers were found to be most weak in these two competencies. The self-learning modules, one each on questioning and reinforcement, developed as a part of Competency Based Teacher Education (CBTE), were used as the training material for one group (A). The other group (B) was trained through microteaching. Since it was presumed that these competencies were complementary, the sequence of activities was introduction to questioning followed by introduction to reinforcement. Group A was distributed copies of the module and left to themselves. Group B was given a detailed theoretical discussion on each competency followed by a demonstration, separately. Each member of Group B then prepared a plan and demonstrated the competencies of questioning and reinforcement. The demonstrations were followed by feedback from two peer observers. Group A also conducted a few (three) demonstrations amongst themselves. At the end of the treatment members of both the groups appeared for a performance-based post-test. The demonstration of the

competencies was assessed by two supervisors on two separate criterion-referenced tests, one each on questioning and reinforcement, separately. Chi-square and t-test were the statistical techniques used for hypothesis verification.

The major finding of the investigation were: (i) In questioning, ten from each group satisfied the criterion-referenced test whereas on reinforcement nine from the microteaching group and seven from the modular approach group satisfied the criterion-referenced test on reinforcement. (ii) The mean score on naturalness for the microteaching group was 7.0 whereas that for the modular approach group was 5.6. (iii) Both the treatments were equally effective.

- 1185.** MUKHOPADHYAY, M. and others, *An Action Research on Alternative Models of Teacher Training*, TTTI, Bhopal, 1981

The objectives of the study were: (i) to develop a scale for the measurement of classroom teaching competence of polytechnic teachers, (ii) to find out the relation between classroom teaching competence and certain characteristics of teachers, and (iii) to design strategies of training teachers in classroom teaching competence and test the relative efficiency of different strategies. Twenty different hypotheses were formulated for the study. Thirteen separate hypotheses were framed to test the relationship between classroom teaching competence and mobility of teachers, experience in teaching, industrial experience, age, qualifications, attendance in short courses/workshops/winter schools/summer schools, satisfaction with teaching, change proneness, attitude towards teaching, teachers' relationship with their principal, job satisfaction, teaching load, and teacher status.

The study was conducted in three phases. In the first phase the classroom teaching competence (CTC) scale and ground rules for observation were developed. In the second phase eighty-one teachers were observed for an entire period by two or three observers on the CTC. All the teachers were administered a questionnaire measuring various variables selected for the study. In the third phase, three groups of polytechnic teachers, each having eleven members, were selected. Each group was given training in introducing a lesson, presenting information through lecture, asking oral questions, employing reinforcement techniques, summarizing a lesson, planning a lesson and using chalkboard through modular approach. One group was trained in the TTTI where each compo-

ment was dealt with by a specialist faculty and in simulated conditions. The second group comprised teachers of one polytechnic, and was provided with copies of the module and left to learn by themselves, except for one teacher coordinating the activity. In the second group, no TTTI faculty was present and teachers were free to use the skills learnt in actual classroom. The third group was another polytechnic-based training group, trained by a TTTI faculty member. All the three groups were tested at the end of the treatment, the last group was also tested on CTC just before the beginning of the treatment. Inter-observer reliability were calculated for the CTC; correlation matrix was drawn to test the relationship between CTC and other variables, the experimental data were subjected to analysis of variance and t-test.

The major findings of the study were: (i) The inter-observer reliability coefficients of CTC varied from 0.73 to 0.93 in various combinations of six observers. (ii) The CTC was not related to mobility, number of short courses attended, industrial experience, teaching experience and qualification, but was related to age. (iii) The CTC was not significantly related to change proneness, attitude towards teaching, job satisfaction, teaching load and teacher status. (iv) The CTC was significantly related to satisfaction with teaching and rapport with the principal. (v) Job satisfaction was significantly related to the teacher's relationship with the principal. (vi) The teachers trained in the polytechnic-based model with tutor (Group III) exhibited significantly higher CTC after training than the other two groups which did not differ significantly between them.

1186. MUTHA, D.N., *An Attitudinal and Personality Study of Effective Teachers*, Ph.D. Psy., Jod. U., 1980

The study attempted to identify the factors attitudinal, motivational and personality — which differentiated effective teachers from ineffective ones.

The sample comprised 300 secondary school teachers — 180 male and 120 female — randomly drawn from the secondary schools of Jodhpur. Teacher effectiveness scale was developed and standardized to form criterion groups. The criterion groups consisted of seventy-five effective teachers and seventy-five ineffective ones. Job satisfaction questionnaire for secondary level teachers was also developed and standardized to study the attitude of teachers towards job and job-related conditions. Besides this, personal factors like sex, age, professional training, income level, nature of residence, mari-

tal status, size of family and nature of schooling, were studied. Personality variables like intelligence, anxiety, teaching aptitude, marital adjustment, extroversion, neuroticism, job satisfaction, values, ascendance-submission and self-concept, were also studied. The tools employed were Raven's Progressive Matrices, Sinha's Self-Analysis Form, Eysenck-Maudsley Personality Inventory, Srivastava's Teaching Aptitude Test, Bhatnagar's Value Scale, Singh's Marital Adjustment Inventory, Sharma's Self-Concept Inventory, and Allport's Ascendance-Submission Scale. Percentage, chi-square, t-test, factor analysis and multiple correlation were employed to analyse the data.

The major findings of the study were: (i) Sex, professional training, nature of schooling and income level were significantly associated with the teacher's effectiveness. (ii) The effective teachers had significantly higher scores on intelligence than the ineffective. (iii) The effective teachers had higher scores on anxiety than the ineffective. (iv) The effective teachers had significantly higher scores on teaching aptitude than the ineffective. (v) The effective teachers had significantly higher scores on neuroticism than the ineffective. (vi) The effective teachers had significantly higher scores on theoretical value than the ineffective. (vii) The ineffective teachers had significantly higher scores on political value than the effective. (viii) The effective teachers had significantly higher scores on job satisfaction than the ineffective. (ix) The set of personality variables — ascendance-submission, anxiety, marital adjustment, extroversion, neuroticism, job satisfaction and teaching attitude — significantly predicted the teacher's effectiveness. (x) Personality variables — ascendance-submission, anxiety, marital adjustment, extroversion, neuroticism, job satisfaction, teaching aptitude, real self-ideal self-discrepancy, religious value, social value, theoretical value, aesthetic value, economic value, political value and intelligence — significantly predicted the teacher's effectiveness.

***1187.** NAGARAJU, C.S., *Evaluation of Radio Correspondence-cum-Contact In-service Teacher Training Programme in Kerala*, Institute for Social and Economic Change, Bangalore, 1982 (Ministry of Education, Government of India-financed)

The project was undertaken with the objectives of (i) examining the plan of the training programme, (ii) ascertaining the existence of coordination among the organizations involved in the training programme, (iii)

diagnosing the bottlenecks in the process of training particularly with reference to the administration of the programme, (iv) identifying the trend of the programme in terms of its utilization by teachers in different subjects, (v) getting feedback from the trained teachers/teachers undergoing training regarding different aspects of the programme and on the needs, problems and perception, (vi) ascertaining the relative use of different components of the training, (vii) evaluating the contribution of radio and correspondence part of the training on the performance of teachers, and (viii) evaluating the entire programme in the light of the findings, and to suggest improvement.

The design of the study included both a case study approach and a survey approach. The sample covered the students (teachers who participated in the radio correspondence courses) during the period of 1976 to 1982, covering the subjects of mathematics, Malayalam, and science. Sixty-six per cent of the teachers responded to the mailed questionnaire. The method of systematic random sampling technique was employed for the selection of the sample, at the stage of mailing the questionnaire and also at the stage of interview. Two separate questionnaires were prepared, one for trained teachers and the other for trainees. A structured interview schedule was prepared, with a scope to arrange the responses on a four or three point scale, as the case may be.

The findings reported under specific aspects included:

I. *Planning*: (i) There was need for in-service training programmes in Kerala. (ii) The majority of the trained teachers were not satisfied with the training they received. (iii) The training course in Malayalam was fast deteriorating. (iv) There was no comprehensive planning and implementation of the programme. (v) There was no scope for using the feedback from trained teachers to improve the programme from year to year.

II. *Organization*: (i) The coordination among the SIE and the AIR for science and mathematics and the SIE, the AIR and the CIIL, Mysore, for Malayalam courses was deteriorating. (ii) The organization of contact courses also suffered from lack of planning. (iii) The duration of the contact programme was inadequate. (iv) There was considerable delay in the supply of learning packets to the trainees, and there was no monitoring effect on the training programme. (v) The trainees were left to themselves for clearing their doubts.

III. *Learning Materials*: (i) Learning packets, especially in science, were the most useful part of the programme, but they needed a lot of improvement. (ii) Though radio lessons were interesting and useful, all the trainees did not listen

to all the programmes, and the participants felt that the learning experiences in the contact programmes were inadequate. IV. *Evaluation*: (i) There was no effort to evaluate the project periodically. (ii) The grades awarded to the trainees were independent of the radio lessons, resulting in the redundancy of radio components. The majority of the trainees felt that there should be a proper examination at the end of the course. V. *Responses of the Trainees*: (i) A majority of them felt that the training was useful to them as it enabled them to learn the topics which they had not studied earlier. (ii) They felt that it improved the academic achievement of their students. (iii) They wanted that the learning packets should contain diagrams, figures, charts, illustrations, examples, and more units of learning. (iv) They felt that the duration was too short, though the programmes were interesting and useful. (v) They wanted that arrangements should be made to clear the doubts, and the contact programmes should be increased and should be interspersed during the training period rather than at the end of the programme.

*1188. NAIK, C., *A Survey of the Teachers Working in Primary Schools in Pune Municipal Corporation Area*, Indian Institute of Education, Pune, 1981

Almost all the 3,296 teachers working in primary schools during the period August 1979 and April 1980 were approached personally and information about them was collected.

The following information was available in the survey: (i) There were two types of schools in the Pune Municipal Corporation (PMC) area — aided and municipal. All aided schools (129) were mixed while 130 out of 207 municipal schools were for boys and 77 for girls. Out of the total number of 336 schools, 258 (76.79 per cent) were Marathi-medium schools, 39 (11.60 per cent) English-medium schools, 24 (7.14 per cent) Urdu-medium schools and the remaining were Gujarati, Hindi, Sindhi, Kannada, Tamil and Telugu media schools. In all, there were ten different media schools. (ii) There were 3,296 teachers in 336 schools. Out of the 1,177 teachers working in aided schools, 65 (5.53 per cent) were male and 1,112 (94.47 per cent) female. Out of 2,119 teachers in corporation schools 606 (28.6 per cent) were male and 1,513 (71.40 per cent) female. Of the 3,296 teachers, 671 (20.36 per cent) were male and 2,625 (79.64 per cent) female. (iii) Out of the 3,296 teachers, 427 (12.95 per cent) were below 25 years of age, 1,179 (35.77 per cent) between 26 and 35 years, 1,319 (40.02 per cent) between

36 and 50 years, and 371 (11.26 per cent) between 51 and 58 years. (iv) Out of the 3,296 teachers, 371 (11.26 per cent) were PSC, 2,476 (75.12 per cent) SSC, 334 (10.14 per cent) B.A., 72 (2.18 per cent) M.A., 28 (0.85 per cent) B.Sc., 3 (0.09 per cent) M.Sc. and 7 (0.21 per cent) B.Com. Also 1454 (44.11 per cent) had P.T.C. training qualification, 1,318 (39.99 per cent) D.Ed., 187 (5.68 per cent) B.Ed., 13 (0.39 per cent) M.Ed. 171 (5.19 per cent) other training qualifications and 153 (4.64 per cent) were untrained. (v) In all, 270 teachers (8.19 per cent) could speak 21 Indian languages other than Marathi; 1848 (56 per cent) could read and write 11 languages other than Marathi (including Marathi in the case of non-Marathi speaking teachers). (vi) There was a large turnout of teachers during the first seven-eight years of service. (vii) Fifty per cent teachers had less than 10 years' experience. Of these, 25 per cent had less than five years' experience. (viii) Single teachers teaching standards V, VI, VII was still a common feature. (ix) About 57 per cent teachers taught all subjects. This percentage was more in aided schools than in corporation schools. (x) Adequate number of teachers for fine arts, drawing, music, craft, sewing, etc., were not available and these subjects were not well attended to.

1189. NIRPHARAKE, A., *Training in Creative Appreciation*, Jnan Prabodhini, Pune, 1980

The major purpose of the investigation was to develop and try out a training programme in creative appreciation. Creative appreciation was defined as recreating the artist's vision, involving evaluation against the criteria of relevance, effectiveness and originality. The investigator developed a special training programme and tried out efficacy in developing creative appreciation.

This was an experimental research. A pretest-posttest experiment was designed. Twelve boys, studying in Class VII, divided into two matched groups, attending different schools, all coming from middle class, urban background, with superior level of intelligence and normal initial level of creativity, formed the sample in the experimental and the control groups. The tools used were Raven's Standard Progressive Matrices, Kothurkar's Group Test of General Mental Ability and Torrance Test of Creative Thinking (TTCT) verbal form A. The independent variable in the experiment was training in creative appreciation, lasting for twenty-five school periods of thirty-five minutes each. This was the treatment which included specially selected tasks. The dependent variable was creativity as measured by TTCT—

form A.

The major findings of the investigation were: (i) The experimental group showed marked improvement in all aspects of creativity after receiving training over the control group as well as over its own pretest scores. The control group did not show any significant improvement over its pretest scores. (ii) Training in creative appreciation was especially effective educationally because it could be adapted to various classroom situations by teachers of languages and fine arts, without having to marshall any extra techniques of creative teaching.

1190. PAIKARAY, G.S., *A Comparison of Different Types of Feedback in Microteaching upon Teaching Competence and Attitude towards Teaching of Student-teachers*, Ph.D. Edu., Utkal U., 1981

The objectives of the study were: (i) to find out the type of feedback which would be most effective in developing better teaching competence among student-teachers, (ii) to find out whether there was any change in the attitude of student-teachers towards teaching as a result of the activities provided in the microteaching programme, and (iii) to reaffirm the conclusion from earlier studies in India that microteaching was a better training device than the traditional training of teachers being provided in teacher training institutions in India.

Pretest and posttest parallel group design was used in this experiment. There was one control group consisting of ten student-teachers who were trained by the traditional training method and six experimental groups having ten student-teachers in each group who were trained by the microteaching method. The control group received feedback by the traditional method while each experimental group received a different type of feedback provided by supervisor, peers, audiotape, supervisor and peers, peers and audiotape, and supervisor and audiotape. Stratified random sampling procedure was followed to form seven matched groups on the basis of their intelligence, attitude, age, sex, qualification and previous teaching experience. Cattell's Culture Fair Test Scale 3, Form A and Ahluwalia's Teacher Attitude Inventory were used for description of the sample while Teaching Competence Scale and two types of observation schedules, one of a rating type and the other of frequency type, were used for the criterion measure.

Some of the findings of the study were: (i) The means of the four experimental groups that were provided feedback by the supervisor, supervisor and peer, peer and audiotape, and supervisor and audiotape differed

significantly at 0.01 level from the mean of the control group. But there was no significant difference between the means of the control group and the other two experimental groups that were provided feedback by peer and audiotape. It showed that the feedback by both peers and audiotape was much more effective than the feedback by peer or audiotape only. (ii) The means of the experimental groups had two distinct trends. The means of the groups that were provided peer feedback and audiotape feedback were of one type and the other groups were of another type. The means of latter groups were distinctly higher than those of the former groups. When any of the means of the former groups was compared with any of the means of the latter groups, the differences between the means became significant but when the means of the former or the latter groups were compared between themselves no significant difference was noticed. (iii) Analysis of the gain scores for teaching skills only gave the same result except in one case where the means of the control group and the experimental group with audiotape feedback differed significantly at 0.05 level for G_1 scores of the teaching skills only. However, this departure was a favourable one as regards the experiment. (iv) Analysis of attitude scores for each of the seven groups involved in the experiment by the difference method as well as by the sign test method for paired observations indicated that for five groups the change was significant while for two groups, i.e. the control group and audiotape feedback group, it was not. (v) Analysis of teaching competence scores and attitude scores indicated that greater teaching competence and more favourable attitude towards teaching in most cases were associated with the supervisor's presence in the groups. The supervisor's role emerged as a very important factor in a microteaching setting.

1191. PAL, H.R., *Curriculum Construction for Developing Social Skills in Teachers for Establishing Closer Contact with Community*, Ph.D. Edu., Indore U., 1981

The objectives of the study were: (i) to identify the social skills which were needed for establishing closer contact with the community, (ii) to select some skills for preparing the curriculum, (iii) to identify the components of these selected skills, (iv) to prepare curriculum material for developing these selected skills, (v) to try out the curriculum material through the regular trainees and to see its effectiveness in terms of their performance on the skills and their opinion toward the prepared curriculum, and (vi) to conduct experimental study in order

to give a final shape to the prepared curriculum material.

The hypotheses tested were: (i) There would be no significant difference between the mean scores on performance in social skills of the experimental group (undergoing treatment through the prepared material) and the control group. (ii) There would be no significant relationship between the mean scores of the student-teachers on their two types of achievement (performance and conceptual) in social skills. (iii) The opinion of the student-teachers towards the prepared curriculum material would be neutral. The study was conducted in two phases, namely, pilot study and final study. For pilot study, two random samples of seven teacher-trainees were selected out of all the B.Ed. trainees of the Department of Education, University of Indore, Indore. The subjects were graduates and postgraduates of various faculties and their age varied between 19 and 27 years.

For the final study, a random sample of 48 B.Ed. trainees, admitted in the year 1979-80, was selected out of all the B.Ed. trainees of the Department of Education, University of Indore, Indore. The subjects were graduates or postgraduates of various faculties, and their age varied between 19 and 30 years. For the present study, in all, eight tools were used. Except the Raven's Standard Progressive Matrices Test all the other tools were prepared by the researcher. Two questionnaires were used, one for validation and selection of social skills, and the other for validation of the components of social skills. For measuring performance in social skills, three observation proformas, each for one skill, were used. For measuring conceptual achievement in social skills an achievement test was used. For measuring intelligence, the Standard Progressive Matrices Test was used. Data regarding the nature of the sample were collected from the office records.

The findings of the study were: (i) There was no significant difference between the mean scores of the experimental group (who received training in the curriculum material) and the control group (who did not receive any training) for all the three skills, namely, communication, organizing function and interviewing. The developed material was useful for the trainees for developing their social skills to establish closer contact with the community. (ii) There was no significant relationship between the mean scores of student-teachers on the two types of their achievement (performance and conceptual) in social skills. (iii) The opinion of the trainees about the prepared curriculum material was favourable for all its aspects, viz., objectives, cartoons, examples, contents, language, utility, general appearance, learning exercises, glossary, model, observation proformas,

etc. (iv) The components — voice quality (skill of communication) and programme conduction (skill of organizing a function) — did need comparatively more training, but addressing words (skills of communication) and receiving (skill of organizing a function) did not require any practice.

1192. PANDE, S.M., *A Critical Study of Supervision Practices*, Ph.D. Edu., Avadh U., 1980

The study was designed to survey the practices and methods used for the supervision of teaching practice of B.Ed. trainees in the colleges affiliated to Avadh University, Faizabad. The survey was conducted in the B.Ed. department of eight colleges.

Two questionnaires were devised — one for the teachers and the other for the B.Ed. trainees. As regards teacher-educators, data were collected about their educational qualifications, age, sex, teaching experience and their workload. They were also asked to state the importance given to lesson planning, maintenance of the diary, time spent by them on actual observation of classroom teaching by B.Ed. trainees, the types of suggestions given by them and the follow-up action taken to see how far their suggestions were implemented. They were also asked to state the specific hindrances in their way in proper supervision of practice-in-teaching.

The findings of the study were: (i) No teacher training department had a separate building. They had to share the classrooms with other departments of the college. They could not have specially equipped rooms for teaching science, history, geography, etc. They did not have tutorial rooms where they could sit and discuss the lesson plans with the trainees. (ii) Most of the colleges did not have hostel facilities. The trainees coming from other places had to face a lot of difficulty in finding suitable lodging and this interfered with their efficiency. (iii) Some of the teacher-educators did not have adequate knowledge of the subject matter in which the trainees delivered their lessons. Their workload was very heavy and 48 per cent of them did not have favourable attitude towards their profession. (iv) Facilities for the organization of teaching practice were not adequate. Most of the training departments did not have their own model schools. They found it rather difficult to persuade schools to allow their trainees to have teaching practice. Sometimes the trainees had to travel considerably long distances to go to schools for teaching practice. Fifty-eight per cent of the principals of the schools where the trainees went for practice-in-teaching had negative at-

titude towards training programmes. (v) The trainees did not take adequate interest in planning their lessons. They somehow tried to complete their work.

1193. PANJWANI, S.S. and others, *Profile of Polytechnic Teachers in India*, TTTI, Calcutta, 1982

The aim of this profile study was to provide an analytical description of characteristics and needs of polytechnic teachers in India. The survey instrument sought respondents' background information, their perceptions of necessary and possessed proficiency levels in thirty-five competency areas and their preference toward in-service teacher training activities. The Polytechnic Data Form and Polytechnic Teacher Data Form were sent to 341 polytechnic principals and 5,193 polytechnic teachers, respectively, all over India. In all, 195 polytechnic principals and 1,585 polytechnic teachers responded.

The findings of the study were: (i) The polytechnic teachers were identified in terms of eight employment status categories and classified into five disciplines/teaching area categories. (ii) Most polytechnic teachers were male and a majority of them were lecturers (except in the southern region, where assistant lecturers were in the majority), and they belonged to the disciplines/teaching areas of engineering, were graduates, participated in special training programmes/courses, belonged to age range 36-40 years, had 11 to 15 years experience of teaching in polytechnics and taught one to four subjects. (iii) The polytechnic teachers in all the regions rated their possessed proficiency level lower than the necessary proficiency level in all competency areas. There were differences in the necessary and possessed proficiency levels of the polytechnic teachers in various competency areas in different regions. (iv) There were differences in proficiency needs of the polytechnic teachers in four regions of India. (v) Most polytechnic teachers were willing to participate in in-service teacher training programmes. A majority of them did not have any teacher training qualification. (vi) Participation of the polytechnic teachers in special training programmes/courses under Quality Improvement Programme was satisfactory. The polytechnic teachers differed in their preferences about the type of in-service teacher training. TTTI was most preferred by them. A majority of the polytechnic teachers preferred certification/compulsory in-service teacher training of polytechnic teachers.

- *1194.** PATEL, C.K., *A Study of the Prevalent Value System of the Secondary Teachers of the High Schools of South Gujarat*, Ph.D. Edu., SGU, 1979

The major objectives of the investigation were: (i) to study the values of secondary teachers of the high schools of South Gujarat and to compare them on different variables such as age, sex and residence, (ii) to isolate and define the primary values from the teachers' conceptions of life, (iii) to find out individual differences in the areas of theoretical, social, economic, aesthetic, political, religious ethical, scientific, philosophical and democratic values, (iv) to determine whether there were any significant differences between the teachers of different groups on the different variables, and (v) to prepare a value scale for different variables.

The sample consisted of 500 teachers selected randomly from the four districts of South Gujarat. Data were collected by using a teacher value inventory and an information schedule. The collected data were analysed by using mean, standard deviation, rank order correlation, t-test, split-half reliability, F-test and chi-square test.

The major findings of the study were: (i) On social, political, economic and religious values, the older teachers scored significantly higher than the younger teachers. (ii) On aesthetic and democratic values, the younger teachers scored significantly higher than the older teachers. (iii) On theoretical, ethical, philosophical and scientific values, there was no significant difference between the two groups. (iv) On religious and aesthetic values, the female teachers scored higher than the male teachers. (v) On political values, the male teachers scored higher than the female teachers. (vi) The rural teachers scored significantly higher on social, political and economic values than the urban teachers. (vii) On aesthetic value, the urban teachers scored significantly higher than the rural teachers.

- 1195.** PATEL, M.S., *A Study of Innovative Proneness of Secondary and Higher Secondary School Teachers*, Ph.D. Edu., MSU, 1979

The objectives of the investigation were: (i) to design and validate an innovative-proneness scale for teachers, (ii) to study the innovative-proneness of secondary and higher secondary school teachers, (iii) to find out certain other characteristics of teachers which were related to their innovative-proneness, (iv) to find out the factors

measured by the innovative-proneness scale developed by the investigator, and (v) to find out the interrelationships among the components of the scale.

A sample of 100 secondary and higher secondary schools was drawn from Gujarat. In all, 100 teachers from the selected schools responded to the innovative-proneness scale. Data were collected with the help of the innovative-proneness scale developed by the investigator. The investigator administered the tool personally under natural conditions and got reliable data. The data were analysed by employing the statistical techniques of mean, standard deviation, t-test, percentile ranks, correlation and factor analysis.

The major findings of the investigation were: (i) There were twenty-one components of innovative-proneness which could be identified. These components were divided into three sections in the scale. (ii) The phi-values of 200 items in the scale ranged from 0.16 to 0.82. (iii) The reliability of Section I was 0.84 by the test-retest method and 0.91 by the split-half method. (iv) The reliability for Section II was 0.77 by the test-retest method and 0.90 by the split-half method. (v) The reliability for Section III was 0.86 by the test-retest method and 0.67 by the split-half method. (vi) As a whole, reliability was 0.86 by the test-retest method and 0.79 by the split-half method. (vii) The factors extracted through the principal component method were: teaching resources, system and staff norms, dogmatism-conservatism, riskiness and curriculum organization. (viii) Regarding innovative-proneness, the mean score was the highest in Banaskantha district and the lowest in Dangs. (ix) Academic qualification, stability in the schools, training and professional reading habit influenced the innovative-proneness of teachers, positively. (x) Age and sex also were significantly correlated with the different components of innovative-proneness. (xi) Professional satisfaction and experience of teachers also were significantly correlated with innovative-proneness. (xii) Different components of innovative-proneness were also highly correlated with one another. (xiii) These components were: individualization, curriculum organization, teaching resources, internal school organization, staff development, school-community relationship, administrative support, staff norms, progressiveness, venturesomeness, teaching-learning process, attitudes to innovations, and change-proneness. These components were also related with innovative-proneness as a whole.

- 1196.** PATEL, P.A. *A Comparative Study of the Effects of Perceptual Modelling and Symbolic Model-*

ling in Microteaching under Simulated Conditions on General Teaching Competence and Attitude towards Teaching of Student-teachers, R.P. Anada College of Education, Borsad, 1978a (NCERT-financed)

The main objectives of the study were: (i) to compare the effectiveness of perceptual and symbolic modelling upon the general teaching competence of student-teachers, (ii) to compare the effectiveness of symbolic and perceptual modelling on the student-teachers' attitude towards teaching, and (iii) to compare the retention level of general teaching competence among student-teachers trained through the perceptual and symbolic modelling.

The Baroda General Teaching Competence Scale (BGTC) was used to record the general teaching competence of the teacher-trainees. The scale contained twenty statements covering all possible teaching skills of a teacher in the classroom at different stages of the lesson. The Teacher Attitude Inventory (TAI) was used to assess the teacher trainees' attitude towards teaching. Culture Free Test (Cattell) was used to measure the level of intelligence of the teacher-trainees. One evaluation schedule was used for each teaching skill during microteaching. One hundred and twenty-eight student-teachers of R.P. Anada College of Education, Borsad, Gujarat, formed the population. Twenty male arts graduate student-teachers were selected. The sample was further matched on the basis of different variables for equating both the groups.

The important findings of the study were: (i) The microteaching treatment with perceptual modelling and that with symbolic modelling were not different in developing general teaching competence. (ii) The microteaching treatment with perceptual modelling and that with symbolic modelling were the same on the level of retention. (iii) The microteaching treatment given with perceptual modelling and that with symbolic modelling produced practically identical outcomes in respect of attitude of the student-teachers towards teaching.

- 1197.** PATEL, P.A., *A Study of the Relative Effectiveness of Microteaching and Traditional Technique of the Teacher Training in the Development of General Teaching Competence of the Student-teachers of Primary Teachers Training College*, R.P. Anada College of Education, Borsad, 1978b (NCERT-financed)

The main objective of the study was to compare the general teaching competence of student-teachers of a primary teacher training college who were trained in developing certain teaching skills through microteaching and of those trained through the traditional technique. The hypothesis tested was: There was no significant difference in the mean scores of general teaching competence of student-teachers of a primary teacher training college trained in teaching skills through the microteaching technique and of those of student-teachers of a primary teacher training college trained through the traditional techniques of teacher training.

A pretest-posttest parallel design was followed. There were two groups, microteaching group (MTG) and traditional technique group (TTG). The Teacher Attitude Inventory (TAI) and Madhokar Patel's Intelligence Test were the tools used. The Baroda General Teaching Competence (BGTC) schedule was used to judge general teaching competency. The sample consisted of forty student-teachers of the M.B.M. Primary Teachers' Training College for Women, Borsad. Two groups were formed at random, each having twenty student-teachers.

The main finding of the study was that the microteaching treatment in simulated condition was significantly better than the traditional teacher training treatment in developing the general teaching competencies.

- 1198.** PATHAK, V.B., *Teacher Education in Eastern U.P.: a Quantitative and Qualitative Analysis*, Ph.D. Edu., BHU, 1979

The specific objectives of the study were: (i) to find out the quantitative expansion of teacher education in eastern Uttar Pradesh, (ii) to evaluate the quality of teacher education, and (iii) to find out the quality of teacher-educators and to locate their problems.

The investigation utilized descriptive survey technique for evaluating the teacher education programme in eastern U.P. The four tools used for collecting data were a general information questionnaire to survey teacher education, one for the teacher educators, and another for student-teachers along with a Hindi adaptation of the Minnesota Teacher Attitude Inventory. A sample of sixteen teacher education institutions with 1,182 respondent student-teachers and 100 teacher-educators was selected. The institutions were selected randomly from among the thirty-three. An attempt was made to include almost all the student-teachers and teacher-educators from these institutions. Classification

of variables and percentages were the main statistics employed for data analysis.

The main findings of the study were: (i) Physical facilities and equipment were, by and large, quite inadequate in most institutions. (ii) There was a rapid increase in the number of teacher education institutions during the seventies; the number rose from sixteen in 1973 to thirty-three in 1978. (iii) Eighty-three per cent teacher-educators were males. Demographically the group was dominated by rural-born, high caste male Hindu teachers in the age group 30-40. The weaker sections of the society were beginning to be represented very slowly. (iv) Most of them were second divisioners; 12 per cent had doctoral degrees and 18 per cent had a first class M.Ed. degree. (v) Their attitude toward the profession as assessed by MTAI was, by and large, unfavourable, only 18 per cent had a positive attitude. (vi) Most students (77.67 per cent) came from the rural areas, of whom 71.60 per cent were male; the proportion of women students from the rural areas was disproportionately low and that from the urban areas high, the reverse being the case with the males. (vii) The most dominant motive for entering the teaching profession was the opportunity to pursue studies throughout life. The other viable motives were the opportunity to work honestly and an interest in teaching; however, the weakest motive was the opportunity to give a new direction to the society. (viii) The student-teachers had a fairly good self-concept. (ix) Analysis of the curricula of the three universities in eastern Uttar Pradesh revealed that the courses of study and co-curricular activities were traditional and superficial, the instructional programmes being pursued in a slipshod manner; innovations were, by and large, unknown and unpractised. (x) The quality of the output as judged by the examination results was poor so far as the knowledge foundation of educational theory and practice was concerned; about 71 per cent got a third division in theory; however, it was considered satisfactory in respect of competence to teach in the classroom situation. (xi) The quality of the input and the output of teacher training institutions varied from university to university; the state of the residential universities was better than that of the departments of education in the affiliated colleges.

1199. PATTED, G.M. and MENCH, G.B., *Professional Preparation of College Teachers*, Kar. U., 1979 (Kar. U.-financed)

The major objectives of the study were: (i) to analyse

the programmes of professional education of college teachers in India, the U.K. and the U.S.A., (ii) to analyse the views of college principals and other educational personnel regarding the professional preparation of college teachers, and (iii) to suggest models for such professional courses.

The sources for data were the syllabi pertaining to the courses of professional preparation of college teachers obtained from the Calicut University, Bombay University, Madras University, Universities of Texas, New York, Glasgow, Aberdeen and Ohio. The tool used was a questionnaire. The sample comprised 143 respondents including forty-four college principals, eighty-five college teachers, twelve heads and teachers of university departments and two administrators.

The major findings of the study were: (i) Almost all subjects (96 per cent) recognised the need for professional preparation of college teachers. (ii) The majority of the subjects were in favour of introducing the course at the pre-service and the in-service levels. (iii) Some of the common objectives favoured by the subjects were: (a) familiarizing college teachers with the aims of higher education, methods of teaching and evaluation, and psychology of learning, (b) helping college teachers to deal effectively with the behaviour problems of college students, and (c) developing teaching skills amongst college teachers. (iv) About half of the number of subjects of each category were in favour of one-year professional course whereas others favoured short-term courses. (v) The college teachers, principals and university teachers suggested the course title as Diploma in College Teaching. (vi) Various content items commonly favoured for theory course were: (a) psychology of learning, (b) principles and methods of college teaching, (c) evaluation techniques, and (d) psychology of creative thinking and problem-solving. In practicum, the common items suggested were: (a) observation of good teaching followed by discussion, and (b) preparation of lecture plan and practice in teaching. (vii) The subjects suggested 20 per cent weightage to content enrichment, 30 per cent to practical work, 10 per cent to action research and 10 per cent to other theoretical aspects of higher education. (viii) Teachers with sound understanding of basic discipline and education with long experience of college teaching were suitable to conduct such a course. (ix) Based on the content analysis of courses from the universities of India, the U.K. and the U.S.A., three models of courses for the professional preparation of teachers emerged.

1200. PORWAL, N.K., *Personality Correlates of Job-*

satisfied Higher Secondary School Teachers, Ph.D. Psy., Agra U., 1980

The objectives of the study were: (i) to identify the personality traits of satisfied and dissatisfied teachers, and (ii) to examine the impact of variables like age, sex, marital status, length of service, scale of pay, location of the working place, type of management and extent of employment of their job satisfaction.

The sample of teachers from higher secondary schools was selected using the stratified random technique in the first stage and out of them 100 satisfied teachers and 100 dissatisfied teachers were identified. The tools used were Job Satisfaction Questionnaire (Jumar and Multra) and Sixteen Personality Factor Questionnaire (in Hindi) by Kapoor. The data were analysed using critical ratios, and chi-square and by calculating coefficients of correlation.

The main findings of the study were: (i) Personality characteristics of satisfied teachers were: reserved, detached, critical, cool, emotionally mature, stable, faced reality, humble, mild, accommodating, conforming and giving way to others, shy, timid, restrained, diffident, withdrawing, cautious, retiring, trustworthy, adaptable, free from jealousy, easy to get on with, practical, careful, conventional, regulated by external realities, proper, placid, self-assured, confident and serene, controlled, socially precise, having strong control over emotions and general behaviour, relaxed tranquil, unfrustrated and calm. (ii) The personality characteristics of the dissatisfied teachers were: warm-hearted, easy-going, participating, less afraid of criticism, emotionally less stable, assertive, independent, stubborn, venturesome, socially bold, uninhibited, spontaneous, self-opinionated, hard to fool, imaginative, rapt in inner urges, careless of practical matter, Bohemian and frustrated. (iii) The satisfied and dissatisfied teachers were similar on factors B, F, G, I, N, Q₁ and Q₃ of 16 PF. (iv) Age appeared to exert an adverse impact on job satisfaction. (v) Sex produced differences in the level of job satisfaction. (vi) The female unmarried teachers were more satisfied than the married teachers of both sexes. (vii) A negative relationship existed between the length of service and the level of job satisfaction. (viii) Rural-urban setting had no significant difference on the level of job satisfaction. (ix) Job satisfaction did not vary with different scales of pay. (x) Well-employed and under-employed teachers did not differ on job satisfaction. (xi) The teachers of government schools were more satisfied than those in privately managed schools.

1201. RAI, V.K., *A Survey of the Problems of Teachers' Training Colleges with regard to Practising Schools*, Ph.D. Edu., Guj. U., 1982

The major objectives of the investigation were: (i) to find out the problems of training college personnel, principals of practising schools, teachers of practising schools and student-teachers arising out of the programme of student teaching, (ii) to conduct a comparative study of the problems of training colleges of Uttar Pradesh and Gujarat with regard to practising schools, and (iii) to make a comparative study of the problems faced by the practising schools of Uttar Pradesh and Gujarat.

The sampling technique used was a combination of random and cluster sampling. It included 730 respondents consisting of 20 principals, 100 teacher-educators, 500 student-teachers, 30 school headmasters, 70 teachers and 10 educationists. The tools used included questionnaires, a checklist and an opinionnaire. Chi-square test, critical ratio and percentages were the statistical techniques used.

The major findings of the investigation were: (i) Fifty-three per cent of the student-teachers of Uttar Pradesh and 31 per cent of Gujarat admitted that they failed to do their responsibilities satisfactorily due to lack of time. (ii) Sixty-four per cent student-teachers of Uttar Pradesh and 82 per cent of Gujarat opined that demonstration lessons were useful for them. Introducing and dividing the unit in a proper way were the problems of student-teachers of Uttar Pradesh and Gujarat, respectively. The student-teachers stated that teacher-educators generally lacked competence in respect of giving guidance. (iii) Student-teachers of both Gujarat and Uttar Pradesh felt that block teaching system created strain. (iv) Inadequate accommodation in classrooms and absence of follow-up of practice lessons were other problems of the student-teachers in addition to the problem of having self-motivation for practice teaching. (v) On the whole, the student-teachers of Uttar Pradesh had more problems to face than those of Gujarat. (vi) Seventy-four per cent of teacher-educators of Uttar Pradesh and 36 per cent of Gujarat reported that they failed to perform their responsibilities during student teaching satisfactorily. Of the teacher-educators of Gujarat 76 per cent against 28 per cent of Uttar Pradesh expressed their satisfaction with their supervisory functions. Their most difficult problems were in regard to establishing good relationship with practising schools and framing suitable time-tables. (vii) The teacher-educators of

Uttar Pradesh and Gujarat admitted that they lacked professional efficiency for satisfactorily guiding student-teachers. (viii) The teacher-educators felt that student-teachers wanted spoon-feeding. They faced the problem of limited periods of practice teaching allowed by schools. Internal assessment was also a problem according to them. (ix) The principals of training colleges felt that they were unsuccessful in realizing the objectives of student teaching because of lack of cooperation from the schools and inadequate time. (x) The headmasters of practising schools of Uttar Pradesh and Gujarat were not happy with the teaching by student-teachers. (xi) The school teachers felt that the programme of student teaching upset their plan of work. (xii) The educationists felt that the objectives of student teaching were not realized, the quantum of student teaching was inadequate, supervision was defective, relationship between colleges and schools was not harmonious and evaluation was defective.

- 1202.** RAINA, T.N., *Dogmatism of Indian Student-teachers*, Regional College of Education, Ajmer, 1974

The major purposes of the inquiry were: (i) to study the value judgement of student-teachers, (ii) to find out whether there were significant differences between experienced and inexperienced student-teachers, male and female teachers, teachers of science and arts on a measure of dogmatism, (iii) to compare student-teachers and teacher-educators on dogmatism, and (iv) to see whether the sample student-teachers differed from similar groups in the U.S.A, and the U.K. in the extent of dogmatism.

The tool used was E-scale, a measure of dogmatism developed by Rokeach. The sample comprised 182 student-teachers (136 male and 46 female) of the Regional College of Education, Ajmer. They all belonged to low socio-economic status. The t-test was used to test the significance of differences.

The main findings of the inquiry were: (i) Experience and age were not related to dogmatism. (ii) There was sex difference in the dogmatism scores. The female student-teachers were more dogmatic than the male student-teachers. (iii) The science and the arts groups did not differ in the degree of dogmatism. (iv) The teacher-educators and the student-teacher differed in significant way in the extent of dogmatism. The teacher-educators were less dogmatic than the student-teachers. (v) The sample of Indian student teachers was less open-minded

than the U.S. and the U.K. samples.

- 1203.** RAINA, V.K., *A Factorial Study of the Personalities, Attitudes to Teaching and Creativity of In-service and Student-teachers Belonging to Three Subject Areas*, Ph.D. Edu., MSU, 1981

The major objectives of the inquiry were: (i) to study personality, attitude to teaching and creativity potential of pre-service and in-service teachers, (ii) to find out if the pre-service teachers of science, arts and commerce differed in their personality, attitude to teaching and creative potential, and (iii) to find out if the in-service teachers of science, arts and commerce significantly differed in their personality, attitude to teaching and creative potential.

The sample consisted of 180 in-service teachers and 180 pre-service teachers specializing in the teaching of science, arts and commerce subjects. Each group in both the samples consisted of sixty subjects. The in-service teachers belonged to eighteen high and higher secondary schools and the pre-service teachers belonged to four colleges of education of Ajmer district. The tools for research included 16 Personality Factor Test (16 PF) adapted and standardized by Kapoor and Mehrotra, Minnesota Teacher Attitude Inventory (MTAI) and Something About Myself (SAM), a measure of creative Potential (Khatena). The statistical techniques included analysis of variance, t-test, factor analysis and rank order correlation.

The major findings of the inquiry were: (i) The in-service teachers were highest on factors H (shy vs adventurous), C (less stable vs more stable), E (submissive vs dominant), A (reserved vs outgoing) and F (sober vs happy-to-lucky). They were lowest on factors B (less intelligent vs more intelligent), L (trusting vs suspicious), I (toughminded vs tenderminded), Q₂ (group dependent vs self-sufficient) and O (placid vs insecure). (ii) The in-service science teachers ranked factors H, C, E, Q₂ and N (forthright vs shrewd) as the top five and factors I, B, L, O, and F as the bottom five. (iii) The in-service arts teachers ranked factors H, C, A, F, Q₄ (relaxed vs tense) as the top five and gave the bottom five ranks to B, L, Q₂, N and Q₁ (conservative vs experimenting). (iv) The in-service commerce teachers gave top five ranks to factors H, C, E, A, F and the bottom five ranks to B, L, Q₂, I and Q₁. (v) The rank order correlation between the science and arts in-service teachers was not significant whereas the same between the science and com-

merce teachers and between the arts and commerce teachers was significant. (vi) The three groups of teachers significantly differed on factors A, B, E, F, I, N, Q₁, Q₂. The pre-service teachers were highest on factors H, E, O, Q₄, F and lowest on B, N, I, L, and M (unconventionality). The pre-service science teachers gave top five ranks to factors H, E, O, Q₄, C, and bottom five ranks to factors B, M, L, A and N. The pre-service arts teachers ranked factors E, O, F as high and gave bottom five ranks to factors B, N, Q₃ (uncontrolled vs controlled), Q₁ and Q₂. The pre-service commerce teachers ranked factors E, H, C, Q₄, O as high and gave bottom five ranks to factors B, I, L, N and M. The rank order correlations between the pre-service science and arts teachers and between the pre-service arts and commerce teachers were significant. (vii) The pre-service teachers differed significantly on seven of the sixteen factors assessed by the 16 PF Test, namely, A, C, H, L, N, Q₁ and Q₂. The in-service and the pre-service teachers significantly differed in their attitude towards teaching when taken as a whole. (viii) There were no significant differences in the attitude to teaching between the in-service science teachers and the in-service arts teachers and the in-service commerce teachers. However, the pre-service science, arts and commerce teachers differed significantly in their attitude to teaching. (ix) The in-service teachers were highest on the factors of intellectuality, self-strength, environmental sensitivity, individuality, initiative and artistry as measured by the test of creative potential. The pre-service teachers were highest on intellectuality, self-strength, environmental sensitivity, individuality, initiative and artistry.

- 1204.** RANA, A. Ü., *Professional Commitment of Home Science College Teachers in India and Its Relationship to Personal and Professional Characteristics and to Organizational Climate*, Ph.D. Home Science, MSU, 1981

The objectives of the study were: (i) to make an analytical survey of the level and kind of professional commitment of home science college teachers of India, (ii) to identify the organizational climate of home science colleges and university departments of home science in India, and (iii) to determine the relationship of value and continuance commitment with the type of organizational climate and with personal and professional characteristics.

Out of 612 home science college teachers of the defined population contacted, usable data were received

from 372. A stratified random sample of 100 was drawn from the defined population to carry out the reliability of the tools used. Data were collected by using the Measure of Professional Commitment Scale, Social Desirability Scale, Organizational Climate Description Questionnaire, and Personal Data Form. The data were analysed by using percentages, coefficient of correlation, and principal component analysis using the correlational matrix.

The major findings of the study were: (i) A majority of the home science college teachers had a moderate level of value commitment and continuance commitment to teaching. (ii) Value commitment, which implied interest in teaching for its own sake, was predominant in the professional commitment of a majority of the home science teachers. (iii) The pattern of characteristics of the teachers with a high level of continuance commitment differed significantly from that of the teachers with a high level of value commitment. (iv) A majority of the home science colleges and the university departments had an open organizational climate. Value commitment and continuance commitment to teaching was not significantly associated with the organizational climate.

- 1205.** RAO, C.S.S. and PATEL, S.P., *A Study of the Status of Regional Centres for the Training of Teachers of the Blind*, National Council for Teacher Education, New Delhi, 1981

The main objectives of the study were: (i) to examine the functioning of the Regional Training Centres (RTCs) for the training of teachers of the blind, and (ii) to assess the facilities provided in the RTCs.

The study included all the four Regional Training Centres located one each in Bombay, New Delhi, Narendrapur, and Madras. Basic data were obtained through a comprehensive questionnaire to each RTC and also through documentary analysis. Following this, on-the-spot studies were conducted by personally visiting the centres. During these visits personal interviews were held with the teaching staff and the students of the respective RTCs. Also, group interviews were conducted with a sample of ex-trainees of the institutions.

The major findings of the study were: (i) The RTCs functioned essentially as appendages to schools for the blind with all the attendant drawbacks. (ii) Sponsorship system was characterized by a number of drawbacks. Among them, utter disregard for meritorious candidates, admission to RTCs was one. (iii) There was mixed opinion about the heterogeneous grouping of student-

teachers with reference to their entry qualifications in a single level course in the RTCs. (iv) Two RTCs had hostel facilities for student-teachers. No RTC had staff quarters. (v) The total enrolment in all the four RTCs put together never exceeded forty-five in any year for the period under study. (vi) There was general complaint about the insufficiency of special equipment and budget provision in all the RTCs. (vii) Curriculum adopted in all the RTCs for the blind was outmoded. (viii) There was acute dearth of literature on special education in the RTCs. (ix) In all the four RTCs, there were only two or three full-time teacher-educators each and the principal of the school for the blind was designated as Director of the RTC also. RTCs depended upon guest lecturers for covering a good portion of their syllabus. (x) Assignments given to the student-teachers were not found to be covering diverse aspects of the teacher education programme or the role of the teachers of the blind. (xi) Co-curricular activities in the RTCs were quite inadequate. (xii) Student teaching was not being organized in a systematic way in some of the RTCs. (xiii) There was much scope for improvement of external and internal evaluation in both theory and practice of teacher education for the blind.

1206. RAO, S.N., *A Psychological Study of Work Adjustment and Teaching Success of Primary School Teachers*, SVU, 1981 (NCERT-financed)

The study aimed at investigating the relation of job satisfaction to several intrinsic and extrinsic factors in the teaching job assuming job satisfaction to depend on work adjustment. It concerned itself with primary school teachers of Nellore and Chittoor districts of Andhra Pradesh.

The variables selected for study belonged to two categories, namely subjective and environmental. The variables under the former category were work values, need satisfaction, work involvement, organizational involvement and locus of control; the environment, category included job challenge, job participation, chances of rising, supervisory support and job autonomy. Questionnaires prepared for the purpose were administered in three sessions, individually. A sample of 520 was drawn on the basis of a 2x2x2 factorial design on the basis of sex, the level of service and the type of management. Each group comprised an equal number of subjects. Mean, standard deviation and multiple range test of difference between the means were calculated for the different variables in the eight groups for testing the

seven hypotheses.

The findings of the study were: (i) There was no difference between the female and the male teachers with regard to job satisfaction, job involvement, work identification, and organizational identification. However, the male teachers were more intrinsically motivated. (ii) A significant relationship between intrinsic motivation and job satisfaction was identified. The length of service was not related to job satisfaction, organizational identification and job involvement. The long and the short tenure of service groups differed on intrinsic motivation, the former showing higher intrinsic motivation. (iii) The urban and the rural teachers differed with regard to intrinsic motivation but not with regard to job satisfaction, work identification and organizational identification. (iv) The external locus of control of the teachers was significantly related to job satisfaction, work identification and organizational identification but not to job participation, job involvement and intrinsic motivation. Job involvement was also related to intrinsic motivation and job satisfaction. (v) With regard to work values, job satisfaction was related to job involvement and upward striving. Job satisfaction was also significantly related to work identification and organizational identification. (vi) Work identification, organization identification, work involvement and organizational involvement of the teachers was distressingly disappointing and job satisfaction of the teachers left much to be desired.

1207. RAY, P.K.S., *Effect of Various Treatments on the Acquisition of Teaching Skills through Microteaching*, Ph.D. Edu., MSU, 1978

The objectives of the investigation were: (i) to study the effectiveness of microteaching under various feedback treatments compared to the integrated skill-based traditional practice teaching on the development of general teaching competence, (ii) to study the relative effectiveness of various feedback treatments in microteaching situations in the development of general teaching competence, (iii) to study the effect of training through microteaching in specific teaching skills on the ability to use these skills in microlessons, and (iv) to study the change in teachers' attitudes towards teaching after the acquisition of teaching skills through microteaching.

The experiment was conducted by using pretest-post-test parallel group design. The study was confined to the secondary school teachers drawn from two educational districts of Orissa. The sample consisted of thirty teachers. Four feedback treatments were studied. Data

were collected using the Baroda General Teaching Competency Schedule, the Teacher Attitude Inventory and a self-evaluation proforma. The collected data were analysed by using parametric and non-parametric statistical techniques. Analysis of variance, Scheffe method of multiple comparisons and Wilcoxon matched-pairs signed-ranks test were used for analysis.

The major findings of the investigation were: (i) The in-service school teachers in the microteaching groups for the acquisition of teaching skills, exhibited significantly higher gain scores of general competence than that of the filler group under integrated skill-based traditional practice teaching at the posttest/retention test over pretest. (ii) The performance of the teachers trained through microteaching for skill acquisition either under supervisory feedback or supervisory-cum-audiotape feedback was significantly higher on the gain scores of general competence than that of the filler group. (iii) The performance of the teachers trained through microteaching for skill acquisition under self-analysis through audiotapes was as effective as that of the teachers in the filler group. (iv) The teachers trained for the acquisition of teaching skills through microteaching under varying sources of feedback did not differ significantly on the gain scores of attitudes from those of the filler group. (v) The in-service teachers reacted favourably towards microteaching, the techniques of skill acquisition, modelling and feedback through supervision with or without tapes.

1208. SAKSENA, I., *Changing Attitude of Students in Modern Society*, Ph.D. Soc., AMU, 1976

The objectives of the investigation were: (i) to study the attitudes of college-going students towards social, economic, religious and political systems, and (ii) to assess the impact of modern values and changes on students.

A questionnaire eliciting the personal data of respondents and their attitude towards educational system, family, marriage, caste, untouchability, status of women, religion and political and economic systems was administered to a representative sample of 300 students studying in three degree colleges of Agra University.

The major findings of the investigation were: (i) The joint family system was considered important because it helped in the development of personality and in solving economic problems. (ii) Respectable family and education of bridegrooms and the ability of the bride to manage household affairs were given preference for select-

ing the spouse. (iii) Dowry and divorce were considered undesirable. (iv) Love marriages were discredited because they led to unhappy life. (v) Students had no objection to marrying outside their caste and did not want to follow their caste professions. (vi) Education was considered the most important status-linked factor. They, however, wanted it to be more vocationally oriented. (vii) The semester system was generally favoured because it kept the students busy in academic pursuits. (viii) The students evinced sufficient interest in the economic system of the country and preferred the modern trend of socialistic pattern of society. (ix) Most of the students favoured government jobs. They desired that employment be regarded as a fundamental right. (x) Students' unions were favoured by most of the students because they provided an opportunity for future training in politics.

1209. SANSANWAL, D.N. and JARIAL, G.S., *Personality Differences among High and Low Creative Teacher-trainees*, Department of Edu., Indore U., 1979

The main objective of the investigation was to study the personality differences among high and low creative teacher-trainees. The sample for the study consisted of seventy-five B.Ed. students studying in the Department of Education of the University of Indore during 1978-79. The tools used were Creative Personality Checklist by Passi and George and the Hindi version of 16 PF of Cattell. On the basis of scores on Creative Personality Checklist, the group was divided into the high creative and the low creative. Thirty-seven trainees formed the high creative group and the rest formed the low creative group. The t-test was applied to test the significance of difference between the mean scores.

The main findings of the investigation were: (i) The high creative group's mean score on Factor B was significantly higher than the corresponding mean score of the low creative group. This indicated that a student from the high creative group was quick to grasp ideas, was a fast learner and intelligent. On the other hand, the low creative group was slow to learn and grasp and was dull. (ii) The high creative group tended to be cheerful, active, talkative, frank, expressive, effervescent and carefree while the low creative group was restrained, reticent, introspective, sober and dependable. The members of the low creative group were sometimes dour, pessimist and unduly deliberate. (iii) On Factor L, the low creative group's mean score was significantly higher

than that of the high creative group. This indicated that the low creative group tended to be mistrusting and doubtful. They tended to be involved in their own ego, were self-opinionated and interested in internal and mental life. On the other hand, the high creative group tended to be free of jealous tendencies, adaptable, cheerful, uncompetitive and concerned about other people. (iv) The high and the low creative groups differed significantly on Factor Q_4 the low creative group scoring higher. This indicated that the low creative group tended to be tense, excitable, restless, fretful and impatient. On the other hand, the high creative group tended to be sedate, relaxed, composed and satisfied. (v) Except these four factors, the two groups did not show any significant difference on any of the other twelve factors.

- 1210.** SARASWAT, R.M., *A Study of Attitude of Trained High School Teachers of Aligarh towards Their Professional Training and the Students Perception of Their Teachers*, Ph.D. Edu., Agra U., 1976

The objectives of the study were: (i) to find out the attitudes of teachers, trained by various universities and serving in the Aligarh district, towards their professional training, and (ii) to compare the attitudes of teachers with reference to differences in sex, academic achievement, intelligence and teaching experience.

The hypotheses of the study were: (i) Most of the high school teachers do not possess positive attitudes towards their professional training. (ii) Significant differences exist in the attitudes of male and female teachers. (iii) The attitudes of teachers towards their professional training are influenced by their sex, academic achievement, intelligence and teaching experience. (iv) There is definite relationship between the teachers' own attitudes and their personality and performance as viewed by their students.

An attitude scale (self-constructed), intelligence test, students' perception of their teachers, personality cum performance scale (the Hindi version of Sorenson's Scale) were used to collect data. One thousand male and female teachers, including arts and science teachers, serving in the Aligarh districts, were studied. Means and standard deviations, critical ratios for differences of means between large groups, t-test for differences of means between small groups, correlations, partial correlations, partial regression equations, multiple regression and analysis of variance were the statistical techniques

applied.

The major findings of the study were: (i) Most of the high school teachers did not possess positive attitudes towards their professional training. (ii) There were significant differences between the male and the female and the science and the arts teachers. (iii) There was no difference between the attitudes of teachers trained by various universities towards their professional training. (iv) High academic achievers did not like teacher training while the low achievers did. (v) The teachers with a low level of intelligence had positive attitude towards teacher training, but the teachers with a high level of intelligence did not. (vi) Teaching experience was not related to attitude towards teacher training. (vii) Academic achievement, intelligence and attitudes were interdependent. (viii) Intelligence had maximum contribution to the determination of attitudes; attitudes were highly saturated with the g factor. (ix) The attitudes of the teachers towards teacher training and the students' perception of their teachers' personality and performance were related. (x) The teachers' attitude towards teacher training influenced their behaviour in the classroom which was inferred by the students' perception. (xi) The female students were better critics of their teachers than the male.

- *1211.** SATPATHY, A., *Self-actualization among Teachers of Higher Secondary Schools in Delhi*, Ph.D. Humanities, IIT, Delhi, 1980

The objectives were: (i) to measure self-actualization of higher secondary school teachers of Delhi working in three types of schools, government, private-aided and public, (ii) to determine the relationships of various personality, organizational and background factors with the self-actualization dimension, (iii) to make a comparative study of organizational variables of the three groups of teachers, (iv) to assess the effect of teachers' perception of organizational climate on self-actualization in the different types of schools, (v) to identify the most reliable variables that could predict self-actualization, (vi) to determine sex differences, if any, in the self-actualization and other factors, and (vii) to study the teacher's efficiency attitude as a multidimensional concept.

The sample consisted of 302 teachers (171 male and 131 female) of sixty-five assorted government, private-aided and public higher secondary schools in the urban and rural areas of Delhi. Teachers were selected on the basis of a two-stage stratified proportionate sample. The tools used were a background information blank for demographic information, Personal Orientation Inventory (Shostrom), Sentence Completion Test (Mukherjee),

teacher's efficiency attitude scale developed by the investigator and Organizational Climate Description Questionnaire (Halpin and Croft). The data were analysed using univariate, bivariate and multivariate statistical techniques.

The findings revealed: (i) Generally, the younger teachers, unmarried, with comparatively a few years of teaching experience, and better educational background scored higher on both the measures of self-actualization (time ratio and support ratio); the female teachers were more time competent. (ii) Age had positive correlation with support ratio for the males while it was negative for females implying that the older female teachers were less inner-directed. (iii) Married male teachers were less inner-directed while the married female teachers were less time competent. (iv) The older teachers with more years of teaching experience of government schools were less inner-directed whereas the older teachers of private-aided schools with more years of teaching experience were less time competent; however, those of public schools were more time competent. (v) The level of self-actualization could be predicted on the basis of the teacher's sex and marital status. (vi) The teachers with high achievement value and less involvement with teaching were more time competent. (vii) The male teachers with high achievement value were more inner-directed while the female teachers with higher involvement with teaching were more time competent. (viii) Consideration and involvement with teaching emerged as significant predictors of time ratio with achievement value as predictor of support ratio. (ix) The teachers of public schools appeared to be more time competent and inner-directed. (x) The teachers of private-aided schools were more time competent than those of government schools; the government teachers were less time competent and inner-directed than the teachers of public schools. (xi) The teachers who preferred their school as a work place over other places were more time competent; the teachers who were frank in expressing their disagreement with the principal freely were more inner-directed; the innovative teachers were usually less time competent. (xii) Those who perceived less disengagement and less aloofness in the organizational climate dimensions were more time competent and more inner-directed those who perceived less hindrance were more time competent while those who perceived less intimacy were less inner-directed. (xiii) Of the organizational variables, frankness of opinion-expression and intimacy were efficient predictors of support ratio while aloofness emerged as a predictor of both the measures of self-actualization.

1212. SHARMA, G.P., *A Study of the Foundational Course Prescribed for B.Ed. Degree of Indian Universities*, Ph.D. Edu. Agra U., 1982

The study specifically aimed at (i) examining critically the existing foundational course, prescribed by the Indian Universities for the B.Ed. degree, with a view to finding out its main defects and outstanding features, (ii) evolving a new foundational course with a view to helping the prospective teachers develop a social philosophy and acquainting them with the ideals of Indian culture and contemporary national ideology as stated in the Constitution, (iii) determining what learning outcomes should form the basis for the selection of the foundational course at the B.Ed. level, and (iv) offering certain suggestions for the improvement of the present foundational course and effect thereby the formation of a model syllabus.

The study fell within the scope of curriculum research. The investigator prepared an eight-phased research design. The Data collection involved examination of the existing foundational course by 2,500 teacher-educator and trained teachers; selection and finalization of learning outcomes by 2,000 teacher educators and trained teachers; selection of the course contents by 2,000 teacher-educators, principals and trained teachers of higher secondary schools having more than five years' teaching experience, and finalization of the objectives by twenty experts. The tools and techniques used consisted of questionnaires and checklists. Simple percentage, difference formula of Guilford and K-R 20 formula were used to quantify and analyse the data precisely.

An overall conclusion from the analytical study of the current foundational course was that there was great diversity regarding aims, titles, combinations, content classification, practical work, etc. This diversity did not stem from any well-defined principles and was entirely arbitrary. In other words, the two outstanding features of the existing foundational course, as revealed by this study, were diversity and arbitrariness.

1213. SHARMA, J.P., *Developing Instructional Material in Civics at 10+2 Level for Pre-service and In-service Teachers*, Ph.D. Edu., Indore U., 1982

The objectives of the investigation were: (i) to study the effectiveness of each module separately in terms of achievement of student-teachers on the criterion tests and opinions of student-teachers about the different aspects of the modules, (ii) to compare the effectiveness of

each of the modules with that of the traditional teaching method employed for teaching Methods of Civics Teaching in terms of achievement of student-teachers on the criterion tests, (iii) to study the effect of sex and qualification and their interaction on the achievement of student-teachers on the criterion tests for each of the modules, (iv) to study the effect of age on the achievement of student-teachers on the criterion tests for each of the modules, (v) to study the effect of teaching experience on the achievement of student-teachers on the criterion tests for each of the modules, (vi) to compare the opinions of graduate and postgraduate student-teachers on different aspects of each of the modules, and (vii) to compare the opinions of student-teachers belonging to high, average and low levels of teaching experience on different aspects of each of the modules.

The study was conducted in two phases — try-out phase and final study phase. The sample for the try-out phase consisted of 152 student-teachers admitted during 1980-81 session to the teacher training institutions situated at Dewas, Ujjain, Bhopal and Khandwa. The final study was conducted in the Regional College of Education and the Government Teachers' Training College, both situated at Ajmer. The sample consisted of 210 student-teachers. The study employed a posttest parallel group design. Data were collected through the use of three criterion tests and an opinionnaire developed by the investigator. The data were analysed by computing mean, standard deviation and percentiles and by employing analysis of variance, t-test and chi-square techniques.

The findings of the investigation were: (i) Ninety per cent of the student-teachers obtained distinction marks after studying Modules I and II, whereas 85 per cent of them reached the distinction level after studying Module III. (ii) A majority of the student-teachers expressed favourable opinions about the different aspects, viz., physical aspect, general nature, nature of content, organization, illustrations, references, style and instructional aids of the three modules. (iii) The mean achievement score on the three criterion tests of the experimental group of student-teachers differed significantly from the mean achievement scores on the same criterion tests of the control group of student-teachers. (iv) There was no significant effect of sex and qualification and their interaction on the achievement of the student-teachers studying through the modules. (v) There was no significant effect of age on the achievement of the student-teachers studying through the modules. (vi) There was no significant effect of teaching experience on the achievement of the student-teachers studying through

the modules. (vii) The opinions of graduate student-teachers as well as postgraduate student-teachers did not differ significantly on the different aspects of the three modules. (viii) The opinions of the student-teachers belonging to high, average and low levels of teaching experience did not differ significantly about the different aspects of the three modules.

1214. SHARMA, J.P., *Growth and Development of In-service Education for Secondary School Teachers in the State of Bihar since 1955*, Ph.D. Edu., Pat. U., 1982

The aims of the study were: (i) to trace the growth and development of in-service education in Bihar since 1955, and (ii) to bring out clearly the philosophy, nature and general implications for the organization of in-service education programmes for continuing education of secondary school teachers.

The National Council of Educational Research and Training was the pioneer of in-service education programmes in the country, which gave birth to extension service in the States. The techniques of in-service education programme had borne fruits, but still the way was long and thorny and the educationists had to discover better techniques to obtain the goals.

There had been a sharp decline in the organization of activities with regard to in-service education programme after the administration of extension centres, formerly administered by the NCERT had been taken over by the Government of Bihar. The Department of Education and Education Ministry should look into the problems and see that the in-service education programme did not remain on paper only. They had to organize the extension centres on sound footing and create conditions for their effective functioning. This they could do by allowing these centres to have separate identity as they used to have during the NCERT administration days.

1215. SHARMA, M., *Progress and Problems of Teacher Education in India*, Ph.D. Edu., Pat. U., 1982

The aims of the study were: (i) to examine the growth pattern of teacher education in India, and (ii) to identify the problems of teacher education in the country. The progress and development of teacher education was examined on the basis of the data collected from reports and journals on teacher education. The information was

collected in the light of the modern concept of teacher education, the qualities of a teacher, the teacher's role in modern society and pre-service and in-service teacher education programmes. Progress and programmes of teacher education during the Five Year Plans in India were also examined.

The main findings of the study were: (i) Even after a lapse of sixteen years, from the publication of the Education Commission Report (1966), teacher education programmes had not undergone any marked improvement. (ii) Methods of teaching and evaluation being used in training institutions were traditional. (iii) There were evidences to show that there was lack of research data in the field of teacher education. (iv) There was dire need of organizing refresher courses, short-term intensive courses in special subjects, practical training, workshops and professional conferences at both the levels (primary and secondary) of teacher education programmes. (v) If education was to meet the demands of our time and of coming decades, the organization, content and methods of teacher education must be constantly improved. (vi) Search for new education strategies and concepts should be undertaken, taking account of the special social and cultural conditions under which the school and the teacher must perform their basic functions. (vii) Since it was not possible to equip the student-teacher with knowledge and skills which would be sufficient for his whole professional life, the initial preparation for the profession in the form of pre-service education and training, should be considered only as the first fundamental stage in the process of continuous education of teachers.

1216. SHARMA, M.C., *A Differential Study of Self-concepts, Personality Adjustment and Values of Teachers at Various Levels*, Ph.D. Edu., Mee. U., 1981

The major objective of the study was to analyse the differences with regard to self-concepts, personality adjustment and values of college, secondary school and primary school teachers, urban and rural teachers and male and female teachers. The hypotheses were: (i) There was no significant difference between the mean scores on various dimensions of the self-concept of various groups of teachers. (ii) There was no significant difference between the personality adjustment scores for various groups of teachers. (iii) There was no significant difference between the scores on various value scales for various groups of teachers.

To measure the variables involved, Bhatnagar's Self-Concept Inventory, Bhatnagar's Allport-Vernon Value Scale (Hindi adaptation) and a self-constructed adjustment inventory, entitled *A Study of Teachers' Problems*, were used. The study was conducted on a sample of 702 teachers of various categories drawn from the total population of teachers of Agra district. The stratified random and cluster sampling procedure was adopted for selecting these subjects, a college or a school being the unit of sampling.

The major findings of the study were: (i) The primary school teachers perceived themselves to be better achievers than the college teachers while the differences between the primary and the secondary school teachers were not significant. (ii) Differences on self-concepts about achievement of the rural and the urban teachers were not significant. (iii) Differences on achievement concepts of the male and the female teachers were significant. (iv) Self-concepts about self-confidence in the case of college teachers were more positive than in the case of the various other groups. (v) The urban teachers had higher mean scores than their rural counterparts with regard to self-confidence. (vi) The male and the female teachers did not differ with regard to the self-confidence dimension of the self-concept. (vii) The college teachers perceived themselves to be suffering from withdrawing tendencies more prominently than the secondary school teachers. (viii) The same was the case when the urban teachers were compared with the rural teachers and the female teachers with the male teachers. (ix) On feelings of inadequacy, the secondary and the primary school teachers did not differ, but the college teachers perceived themselves as having the least feeling of inadequacy of all the groups. (x) The urban teachers also, as compared to the rural teachers, seemed to have less feelings of inadequacy. (xi) Sex difference was not important on this dimension of the self-concept. (xii) On emotional stability, the female teachers perceived themselves as being more emotionally instable than the male teachers. (xiii) Differences on occupational, health, home, emotional and social adjustments were also significant among these groups of teachers. (xiv) Similarly, value structures of the various groups of teachers were also significantly different.

***1217.** SHARMA, M.L., *A Study into the Development of Teacher Competencies of the B.Ed. Student-teachers in the Training Colleges of Rajasthan*, Ph.D. Edu., Raj. U., 1979

The investigation aimed at identifying the factors of teacher competency and to study the development of teacher competency among student-teachers of the training colleges of Rajasthan. The objectives were: (i) to identify the classroom behaviour patterns of student-teachers which related to their competency, (ii) to know the impact of teacher-training in the development of teacher competencies of the student-teachers, (iii) to compare the results of the study, in terms of patterns, with those obtained by Ryans, (iv) to study the relationship between the rating done by supervisors and student-teachers regarding the classroom behaviour of student-teachers, (v) to study the relationship between the development of classroom behaviour of a small group of student-teachers as perceived by supervisors and school teachers, and student-teachers and the pupils taught by them, and (vi) to predict changes in the classroom behaviour of student-teachers with the help of different predictor variables.

The sample was drawn from three teachers' training colleges of Rajasthan. One teachers' training college was selected randomly from among the colleges affiliated to University of Udaipur, University of Jodhpur and University of Rajasthan. In all, 350 B.Ed. student-teachers were selected randomly from the three colleges. The tools used were Classroom Observation Record (COR) originally developed by Ryans, Socio-Economic Status Scale (SESS) by Kuppaswamy, Teacher Behaviour Characteristics Scale (TBCS) for student-teachers developed by the investigator, and students' version of TBCS for use by the pupils taught by the student-teachers developed by the investigator. The marks obtained by the student-teachers in their B.Ed. practical examination were noted down by the investigator from the records maintained at the three colleges after the declaration of their B.Ed. results. Factor analysis, analysis of variance, analysis of covariance, t-test, product moment correlation and stepwise multiple regression analysis were used to analyse the data.

The investigation yielded the following findings: (i) The five teacher's competency factors identified were: authenticity-integration, consideration control, responsibility-openness, innovativeness-attractiveness, and pupil behaviour. The inter-correlations among the five factors were positive and high, significant at 0.01 level. (ii) The fifteen teacher's behaviour characteristics which were grouped into five factors were efficiency-integration, teacher's image-class management, attraction-encouragement, apathy-control, and originality-confidence. All these factors were positively correlated with

one another and were significant at 0.01 level except for the factors of apathy-control and originality-confidence which were correlated positively but at 0.05 level. (iii) The college supervisors perceived that the student-teachers developed competencies due to practice teaching on all the five factors of COR, significantly. (iv) The development of the factors of consideration-control and innovativeness-attraction caused the change in pupils' behaviour. (v) The development of competencies of the student-teachers during the course of practice teaching was independent of their teaching experience, age and socio-economic status. (vi) The student-teachers who obtained 60 per cent marks or more in their final university B.Ed. practical examination showed better performance on the factor of pupil behaviour than those who obtained less than 48 per cent marks. (vii) Marital status, sex, area of teaching experience (urban-rural), previous training, graduation from college or done privately, and academic achievement of student-teachers had no significant effect on the development of their competencies during practice teaching. (viii) The coefficient of correlation between the factor of responsibility-openness of COR and the factor of teacher's image-class management of TBCS was significant at 0.01 level. The coefficient of correlation between the factors of pupils' behaviour and consideration-control of COR, and the factors of teacher's image-class management and attraction-encouragement of TBCS, respectively was significant at 0.05 level out of which the latter was negative.

1218. SHARMA, U.S., *A Comparative Study of the Effects of Selected Training Programmes on Physical Fitness and General Motor Ability of Women Students*, Ph.D. Edu., Del. U., 1980

The main objectives of the study were: (i) to equip teachers with the methods and techniques of developing their physique and functional efficiency, (ii) to raise the physical level of our youth in order to improve the status of those who were physically unfit, (iii) to provide a physical fitness maintenance programme for all pupil, and (iv) to find out the effectiveness of calisthenics, circuit training, isotonic-isometric exercises and yogic exercises.

The sample consisted of women B.Ed. students of the Central Institute of Education, Delhi University, of two sessions, namely, 1976-77 and 1977-78. The tools used for data collection were Ashper Youth Fitness Test and Scott's Motor Ability Test. No hypothesis was framed. For the purpose of analysis of the result, analysis of

covariance was applied.

The major findings of the study were: (i) For physical fitness, the most effective treatment was the isotonic-isometric exercises. Others in order of their effectiveness were circuit training, yogic exercises and calisthenics. The differences among each of them were significant at 0.01 level except in the case of the difference between the yogic exercises and calisthenics, which was significant at 0.05 level. (ii) An analysis of all the four systems of exercises revealed that the more an exercise was amenable to adjustment to its difficulty level, the more effective it was. The above result substantiated that exercises for physical fitness were likely to prove more effective if they could be adopted to follow the general principles of learning and motivation. (iii) For general motor ability the experimental treatments in order of their effectiveness, from the highest to the lowest, were circuit training, isotonic-isometric exercises, yogic exercises and calisthenics, all the differences were significant at 0.01 level. (iv) The development of physical fitness and general motor ability was not cluttered with any extraneous factors like nutrition, heredity, environment, etc., as borne out by comparing the performance of the control group with the experimental group.

1219. SHARMA, V.S., *Effectiveness of Pre-service Teacher Training Programme at Elementary Level in Rajasthan*, SIERT, Udaipur (NCERT-financed)

The study was carried out with the overall purpose of finding out the effectiveness of the two-year teacher training programme at the elementary level in Rajasthan. The specific objectives of the study were; (i) to identify and analyse some of the prospective classroom behaviour patterns, various perspectives and perceptions and intellectual and emotional qualities of teachers on the basis of the opinion of teacher-educators, (ii) to study the classroom behaviour patterns of trained and untrained teachers working in the field of elementary education, (iii) to know supervisor's opinion about the classroom behaviour patterns of trained and untrained teachers, (iv) to evolve classroom profiles of trained and untrained teachers in Rajasthan using the Flanders' Interaction Analysis Category System, (v) to compare the teaching aptitude of trained and untrained teachers, (vi) to compare the preparedness of trained and untrained teachers with respect to subject-content of teaching at the elementary classes, and (vii) to compare the classroom interaction patterns of trained and untrained

teachers of the elementary schools.

In all, four tools were used in the investigation. After carrying out a critical study of the two-year STC syllabus, a blank for ascertaining weightage was prepared and used for soliciting the opinion of teacher-educators. A questionnaire-cum-attainment test for teachers was evolved and used, which consisted of items on the preparedness of teachers and the application aspects of the training imparted to teachers in their training programmes. One observation schedule was used for observing the classroom teaching of trained and untrained teachers. In order to solicit the opinions of supervisors about teachers working in schools, an interview schedule was used. The blank for ascertaining weightages was administered to a sample of fifty teacher-educators working in twenty-five teacher training institutions of the State of Rajasthan. The sample for finding out the effectiveness of the training programme consisted of 550 teachers — 363 trained and 187 untrained — working in various primary, upper primary, secondary and higher secondary schools in Rajasthan. In order to judge the effectiveness of the pre-service teacher training programme, comparisons were made between the classroom behaviour of the trained and the untrained teachers. The aspects of comparison included preparedness of teachers, classroom behaviour of teachers by means of FIACS and traditional approach, aptitude of teachers, and supervisors' perception about the performance of teachers in organizing curricular and co-curricular activities in school situations.

The major findings of the study were: (i) In almost all the aspects of preparedness of teachers, the trained teachers had a definite superiority over the untrained teachers. Only in one case, namely, mastery over the subjects other than the four basic subjects, the critical ratio was non-significant. However, the mean score of the trained teachers was higher than that of the untrained teachers. (ii) The trained teachers differed significantly from the untrained teachers in respect of cooperative aptitude and moral character. In relation to the rest of the constituents of the teaching aptitude, such as kindness, patience, wide interest, fairness, discipline, optimism, scholastic taste, and enthusiasm, there was no significant difference in the aptitude of the trained and the untrained teachers. (iii) On the basis of the FIACS technique, all the behavioural characteristics of the trained teachers differed significantly from those of the untrained teachers. (iv) The trained teachers talked slightly more in the classroom than the untrained teachers; silence or confusion was also more in the classrooms of the trained teachers. (v) The pupil's talk was

more in the case of the untrained teachers. The untrained teachers were more prone to purely content-oriented interaction than the trained teachers. Sustained pupils' talk and teachers' response after the pupils stopped talking were also more in the case of the untrained teachers. (vi) From the point of view of all the aspects of classroom observation, the trained teachers showed definite superiority over the untrained teachers. Out of the eight critical ratios worked out in this context, four ratios relating to the introduction of a lesson, the development of a lesson, the use of teaching aids, and personality and classroom climate differed significantly at 0.01 level and the rest relating to the technique of questioning, mastery over the content, evaluation of the lesson and classroom interaction differed at 0.05 level of significance. (vii) According to the supervisors, the trained teachers were superior to the untrained teachers in all aspects, namely, classroom teaching organization of curricular and co-curricular activities and personal qualities.

*1220. SINGH, B., *Teachers' Motivation to Work*, Ph.D. Edu., Raj. U., 1980

The main objectives of the study were: (i) to construct and standardize a test of teachers' motivation to work, (ii) to study the motivational level of teachers to work, (iii) to identify the work, area-wise and the motivational level of teachers, and (iv) to investigate the factors affecting teachers' motivation to work.

The sample consisted of 556 teachers selected randomly from certain selected secondary and higher secondary schools of Ajmer and Jaipur divisions. Out of 556 teachers, 217 had to support large families and the remaining 339 teachers small families. There were 462 male and 94 female teachers in the sample. The investigator identified the broad areas of teachers' work through discussions with teachers, headmasters, administrators and educationists. The areas of teachers' work identified were: (i) classroom teaching, (ii) school organization and administration, (iii) evaluation and guidance, (iv) co-curricular activities, and (v) extra activities. The preliminary form of the job chart and its appropriateness were discussed in a meeting of the committee consisting of two educationists, two headmasters, one educational administrator, and two experienced teachers. The finally proposed job chart for secondary and higher secondary school teachers was also discussed with twenty-five headmasters and headmistresses of the sampled schools of Jaipur and Ajmer divisions. To discriminate between the motivated and the unmotivated be-

haviour suitable criterion was developed. Teachers bio-data were obtained with the purpose of identifying the factors affecting teachers' motivation to work. The preliminary form of the test was administered on 400 teachers. Item analysis was carried out to find out the highly discriminating items. The selection of the items for the final form of the test was made by giving due representation to different work areas. The final form of the test was administered on 556 teachers. The total scores as well as the area-wise scores were counted for each teacher. Percentile norms of the test were established. Face validity of the test was judged by experienced teachers, headmasters, educational administrators and educationists. Validity of the test was also found against outside criterion. Correlation between the test scores and the rank scores was found to be 0.53. Reliability of the test was found out by computing the stability coefficient. Correlation between the test scores of both testings was 0.87.

1221. SINGH, G., *Comparative Study of Different Strategies of Integration of Teaching Skills*, Ph.D. Edu., BHU, 1982

The major aims of the study were: (i) to compare the effects of integration training through summative pattern with those of the traditional practice teaching programme on three criterion variables, viz., attitude towards teaching, integration of teaching skills and general teaching competence, and (ii) to find out whether different sources of feedback produced varied effects on the above variables.

The sample consisted of forty eight B.Ed. trainees chosen out of a total of 200 and divided into four groups of twelve trainees each — the control group, the auto-feedback group, the peer-feedback group, and the supervisory-feedback group. Data were collected with the help of the General Teaching Competence Scale of Passi and Lalitha, the Teaching Assessment Scale of Passi, *et al.*, and Ahluwalia's Teacher Attitude Inventory. The study followed the four parallel-group design providing all the groups with similar training in teaching skills in simulated microteaching situation and measuring the difference attributed to integration of teaching skills. The t-test was applied to test the significance of difference between the means of pre-test and post-test scores of the four groups. The technique of analysis of covariance was resorted to for comparing the significance of variance among the four groups.

The findings of the study were: (i) There was significant

ant positive impact of integration training through summative model of general teaching competence (implying that integration training was helpful to student-teachers in achieving better teaching competence and better teaching effectiveness). (ii) There was positive influence on the teacher's performance of immediate feedback (from peers or supervisors or through replay of the tape) given more objectively and definitely in terms of the components of integrated skills. (iii) The microteaching technique in the controlled laboratory environment as well as the reality of bonafide teaching was quite effective.

1222. SINGH, L.C., *et al.*, *Third National Survey of Secondary Teacher Education in India*, NCERT, 1982

Realizing the utility of collecting periodically the basic data in teacher education, the Department of Teacher Education, NCERT, conducted the third national survey of teacher education institutions at the secondary level in 1971. The major objective of the survey was to know the status of secondary teacher education institutions with regard to their theoretical and practical instructional programmes, student population, staff, finances, physical facilities.

A comprehensive questionnaire was prepared to collect the required information for the three consecutive academic sessions 1968-69, 1969-70 and 1970-71 from 381 institutions that existed in April 1971. However, only 68 per cent institutions supplied the survey data on which the final report was prepared.

The main findings of the survey were: (i) During 1963 and 1971, 42.5 per cent additional teacher education institutions (TEIs) came into existence. On April 1971, the total number of TEIs was 381. (ii) In 1971 77.6 per cent TEIs were functioning as independent institutions and 22.4 per cent as sections of postgraduate colleges or university departments. 83.0 per cent TEIs were coeducational and 63.0 per cent were privately managed (aided or unaided). (iii) As many as fifty-eight universities exercised academic control over 93.82 per cent TEIs in 1971 while three State Departments of Education controlled 6.17 per cent TEIs. (iv) As such, 64.09 per cent institutions offered only B.Ed./B.T./L.T. whereas 15.44 per cent ran both B.Ed. and M.Ed., 20.46 per cent offered other courses like Diploma in Education, M.Phil. Ph.D. and D.Lit. and 10.81 per cent TEIs offered courses for elementary teachers in addition to B.Ed./B.T. Also, 35.90 per cent institutions had their

own departments of extension services. (v) The average enrolment of B.Ed. students per institution increased from 128.8 in 1968-69 to 137.1 in 1970-71. On an average 45 per cent students admitted to B.Ed. were freshers. The dropout rate was approximately 6 per cent per year. Pass percentage remained steady, around 90 per cent. (vi) The students, both with graduate and postgraduate qualifications, were admitted to B.Ed. in 1970-71. They had better divisions than those admitted in previous two sessions. Average age of B.Ed. students also showed an upward trend over the three sessions. (vii) English as medium of instruction was used in 56.8 per cent TEIs while as medium of examination in 71.8 per cent institutions. Hindi and some regional languages were also used as instructional and examination media by some of the TEIs. (viii) Large variations were noticed regarding the number of theory papers offered by various TEIs. Principles of education and educational psychology were offered by all the responding institutions as compulsory papers. Orientation programme was organized by most of the institutions for general orientation of student-teachers. Among the methods of teaching followed in TEIs, the lecture method was the most popular one. In addition, assignment, tutorials, seminars, etc, were also practised as teaching methods. The majority of the institutions offered two teaching subjects for the practice teaching programme. The total number of lessons ranged from forty to sixty; block teaching practice was the most popular pattern. The majority of the institutions organized practice teaching on full days while the remaining had it on half days. Most of the institutions had one or two attached demonstration schools. The lesson plans prepared by student-teachers were checked and approved by method masters in 79.9 per cent TEIs. Supervision of full teaching period was done in 58.7 per cent institutions. (ix) Maximum marks allotted to theory, practice teaching and practical work ranged from 400 to 750, 100 to 400 and 50 to 450 respectively, in most of the institutions. Assessment of these three aspects of the curriculum was invariably both internal and external. Internal assessment was based on periodical tests and/or assignments. (x) Government grants, managements' contribution and fees from students were the main sources of income for the majority of the TEIs. Salaries of the teaching and non-teaching staff was the main item of budget expenditure. Thirty-nine per cent TEIs provided financial help to student-teachers in the form of scholarships, stipends and freships. (xi) The teacher-educator and student-teacher ratio, on an average, was 1:12. (xii) Regarding academic qualifications of teacher-educators, 6 per cent had Ph.D., 78.4 per cent

M.A./M.Sc., 15.6 per cent B.A./B.Sc. Regarding their professional qualification 60 per cent possessed M.Ed. and 37.9 per cent B.Ed.

1223. SINGH, M.R., *Awareness and Knowledge of Recent Developments in Education and Their Correlates among B.Ed. and M.Ed. Students*, Ph.D. Edu., MSU, 1981

The main objectives of the investigation were: (i) to study the awareness and knowledge of recent developments in education of B.Ed. and M.Ed. students, (ii) to study the relationship between awareness of recent developments, knowledge of recent developments, utilization of sources of information on recent developments, professional teacher's attitude and grade point average for B.Ed. and M.Ed. students, separately, (iii) to study the effect of the institutions' location and management on the awareness and knowledge of recent developments, (iv) to study the effect of sex, age, level of general education, specialization, personal, status, etc., on the awareness and knowledge of recent developments in education, and (v) to study the effect of level of achievement in the degree/ postgraduate courses on the awareness and knowledge of recent developments in education with respect to B.Ed. students only.

The B.Ed. and M.Ed. students of the University of Madras during 1977-78 constituted the population of this study. Two samples of 546 B.Ed. and 78 M.Ed. students were chosen by stratified sampling. The tools used in the study were, Ahluwalia's Teacher Attitude Inventory and Kuppaswamy's Socio-Economic Status Scale. In addition to these, four tools specially designed and constructed for the study were Student Information Blank, Rating Scale on Awareness of Recent Developments, Checklist on Utilization of Sources of Information and a Test on Knowledge of Recent Developments in Education. The data were collected by administering the tools of research in the last fortnight of the B.Ed. and M.Ed. courses in 1977-78 in the colleges of education of the University of Madras. The grades of the B.Ed. and M.Ed. students were collected from the concerned colleges at the same time. The data were analysed using statistical techniques like percentages, t-test, F-test and product moment correlation.

The major findings of the investigation were: (i) The mean score on awareness scale was 55.61 per cent in the B.Ed. sample and 58.47 per cent in the M.Ed. sample and the latter had a small advantage over the B.Ed. students. (ii) The mean score of knowledge of recent de-

velopments in education was 43.58 per cent in the B.Ed. sample and 58.73 per cent in the M.Ed. sample and the two groups differed significantly. (iii) The B.Ed. and the M.Ed. students made extremely limited utilization of sources of information for developing their awareness and knowledge. (iv) The teacher education courses of the University of Madras were deemed to be successful in developing the attitudinal component of the student-teachers. (v) Among the B.Ed. students, regarding the awareness of recent developments, women were better than men, arts students were better than science students, more experienced students were better than less experienced students, students belonging to high SES group were better than those belonging to low SES group, urban students were better than rural students, students not receiving financial assistance were better than those receiving financial assistance. (vi) The age, the management of the college, the level of general education and the personal status did not influence the awareness of recent developments in education. (vii) The age, in the case of M.Ed. students was a factor influencing the awareness of recent developments. (viii) The knowledge of recent developments was higher in the case of women students than men students, urban students than rural students, students of government colleges than those of private colleges, students above 35 years of age than those below 35 years, students having independent status than those not having independent status, and students in high SES group than those in low SES group.

1224. SINGH, R.J., *An Investigation into the Psychological and Sociological Background of Creative and Non-creative Student-teachers*, Ph.D. Edu., Luc. U., 1978

The study was designed to compare the high and the low creative student-teachers in terms of values, personality adjustment, teacher's attitude, family background, age, sex, urban/rural residence, marital status, religion and caste. It was hypothesized that (i) the creative group would be significantly higher than the non-creative group in terms of theoretical, aesthetic and economic values, the different dimensions of personality adjustment and teacher's attitude, and (ii) there would be significant differences between the two groups as regards family background and urban/rural residence.

Torrance Tests of Creativity were administered to 442 B.Ed. students studying in different teacher training institutions in Lucknow. Two groups, one consisting of eighty-nine creative students (those having top 20 per

cent scores) and the other consisting of eighty-nine non-creative students (those having bottom 20 per cent scores), were set up. The tools employed for the collection of data regarding psychological make-up and sociological background of the student-teachers included Ojha Study of Values, California Test of Personality, Minnesota Teacher Attitude Inventory and a questionnaire on sociological background of the student-teachers.

The major findings of the study were: (i) The creative group was significantly higher than the non-creative group as regards the economic value. (ii) The creative group had superior family background and came from urban areas. (iii) Age, sex, marital status, caste and religion were not related to creativity. (iv) Though the scores for the creative group on the aesthetic value and teacher's attitude were higher than those for the non-creative group, the differences between the two groups were not statistically significant. (v) Out of the sixteen dimensions of personality, the creative group showed significantly better adjustment with respect to the sense of personal freedom and social standards. (vi) The scores of the creative group were lower than those of the non-creative group as regard the theoretical value.

1225. SINGH, S., *Relationship between Teachers' Personality, Teaching Success and Behavioural Changes in Students*, Ph.D. Edu., Udaipur, U., 1978

The major objective of the investigation was to find out the relationship of teacher's personality, success in teaching and impact on students' behaviour.

The basic sample comprised 135 permanent male teachers with a minimum of three years' experience in teaching and 2839 boys of Class IX of the secondary and higher secondary schools of Udaipur. For the final study, ninety teachers, equally divided into high, average and low groups, were selected on the basis of students' rating, headmasters' rating and performance of students in public examinations. Factors, such as geographical location, sex, age, educational qualifications, experience, subjects taught and income, were controlled. The case study method along with the casual comparative method and the correlational technique were used. The tools used were teaching success rating scale, information schedule, interview schedule, critical incidents blank, behaviour change questionnaire, all of which were constructed by the investigator; Allport Vernon-Lindzey Study of Values, 16 PF, Incomplete Sentences Blank and Rorschach Inkblot Test were also

used. Data were analysed with the help of mean, standard deviation, t-test, median test, chi-square test and other necessary techniques.

The major findings of the investigation were: (i) The theoretical and social values were positively related to teaching success but the economic and aesthetic values were negatively related. (ii) The highly successful teachers were assertive, venturesome, controlled, emotionally stable and trusting. (iii) The highly successful teachers were better adjusted than the average and low teachers while the average successful teachers were better adjusted than the low successful teachers. (iv) Positive attitude towards family, a sense of identification with the people, place and profession and a growing concern for the school, students and studies were helpful in making a teacher successful. (v) The highly successful teachers possessed better intellectual capacity and efficiency, had higher creative potential and level of aspiration, showed more introversion and better adjustment than the average and low successful teachers. (vi) The highly successful teachers were able to induce learning, develop interests and foster desirable attitudes in their students. (vii) The unsuccessful (low successful) teachers contributed significantly to developing aversion to the subject, creating misunderstandings and fostering undesirable attitudes and producing little subject learning.

1226. SINGH, S., *A Critical Study of the Programmes of the Pre-service and In-service Education of Teachers of Higher Education in India*, Ph.D. Edu., MSU, Baroda, 1980

The objectives of the investigation were: (i) to study the needs of pre-service and in-service education programmes as felt by the university teachers, (ii) to study the objectives of the pre-service and in-service education programmes as they were being conducted by various institutions, (iii) to study the pre-service and in-service programmes in terms of their types, duration, syllabi and methods of teaching, (iv) to seek the opinions of the participants regarding the evaluation of their performance in the programmes and the usefulness of the programmes, (v) to study the attitude of the teachers of universities towards pre-service and in-service programmes, and (vi) to develop a syllabus for training teachers of higher education.

The sample consisted of 512 university teachers, including pre-service, in-service and untrained teachers, from different universities, viz., Annamalai University,

Calicut University, M.S. University of Baroda, Madras University, Madurai University and summer/short-term institutes conducted by a few universities financed by the UGC. Sixty-five experts who were concerned with these programmes or those who taught the M.Ed. class, were requested to give their opinion about the syllabus for training programmes. The deans, heads, conveners and the directors of the institutes were interviewed. Data were collected with the help of two questionnaires prepared by the investigator and a semi-structured interview schedule also prepared by the investigator. The data were analysed using t-test and rank difference method of correlation.

The major findings of the investigation were: (i) The programme was helpful for the pre-service, in-service and untrained teachers. (ii) The main aspects helpful to them in their teaching learning process were techniques of teaching, skills leading to effective teaching, skills of understanding the behaviour of students, developing confidence in teaching, better knowledge of motivational factors, knowledge of educational psychology and techniques of evaluation. (iii) The input of the programme changed the attitude of the teachers at 0.01 level, making it more favourable than the previous one. (iv) There was no significant difference of opinion about the aims of the programme between the pre-service group and the in-service group. But the untrained teachers differed significantly about the aims from the pre-service and in-service teachers. (v) The teachers who underwent pre-service programmes, favoured pre-service programmes whereas those who underwent in-service programmes, favoured in-service programmes. (vi) Regarding the duration of the course, the pre-service programme was suggested for one academic year whereas in-service course was suggested for one full semester to be conducted in the evening. (vii) The present syllabus was acceptable to both the groups. So far as teaching methods were concerned, lecture followed by discussion was rated first, the multi-media approach was rated second and the lecture method was rated third. (viii) All the teachers indicated a sense of dissatisfaction with the existing system of examination in universities/colleges. (ix) Most of the participants felt that there should be some procedure for evaluating the performance of participants in the orientation programme.

1227. SINHA, P., *An Evaluative Study of Teacher Education in Bihar*, Ph.D. Edu., Pat. U., 1982

The main objectives of the study were: (i) to evaluate

various innovative programmes in the field of teacher education in Bihar, and (ii) to examine the impact of these programmes on the quality of output.

The study was based on a randomly selected sample of forty-four primary teacher education colleges out of a total of eighty-four colleges and all the ten secondary teacher education colleges in Bihar. A questionnaire, consisting of forty items seeking personal data, institutional data, information about teachers, students, syllabus, and evaluation process, was prepared for the study and was sent to the principals and the teacher-educators of the colleges selected in the sample. The investigator personally visited the colleges and collected data. The principals and the senior teacher-educators were also interviewed to verify the entries in the questionnaire and missing items of information were thus supplemented.

The main findings of the study were: (i) At the primary level, about 60 per cent of the teacher-educators were trained graduates and their performance was not satisfactory. (ii) Over 77 per cent colleges had no building of their own while 65 per cent colleges had their own buildings in poor condition. (iii) A majority of the colleges had inadequate staff, library, equipments and laboratory. (iv) Recent innovations in teacher education had not been incorporated into the system. (v) In-service programmes were not carried on effectively and there was little attention paid to follow up programmes. (vi) The evaluation process had remained traditional. (vii) Practice teaching in colleges of education was being neglected by the method masters.

***1228.** SINHA, U., *The Impact of Teacher Education Programme on the Professional Efficiency of the Teachers*, Ph.D. Edu., BHU, 1980

The main aims of the study were to find out the impact of teacher education programme on (i) the effectiveness in classroom teaching, (ii) teachers' competence to perform non-teaching roles, such as maintaining good interpersonal relationship with students, colleagues and principals, doing office work, giving guidance to students, participating in the activities of associations, committees and community life, and participating in co-curricular activities, and (iii) the attitudes of teachers toward teaching and teacher-pupil relationship.

Three null hypotheses were formulated for carrying out the study with precision. The study was conducted on a sample of seventy-two matched pairs of trained and untrained teachers. The matching was done on the basis

of subjects' age, sex, qualification, experience, subjects taught and the institutions served. A scale, covering three dimensions, viz., personality, teaching skill, and class management, prepared by the investigator, was used for measuring teaching efficiency. Shikshak Karya Parisoochi prepared by the investigator was used for assessing how well the teachers performed their different roles as professionals. Hindi adaptation of Minnesota Teacher Attitude Inventory was used for measuring the attitude of the subjects towards the teaching profession and teacher-pupil relationship. In addition to descriptive statistics, the t-test was used for analysing the data.

The main findings of the study were: (i) In the sphere of professional efficiency, the trained teachers were better than the untrained teachers in the knowledge of the subjects, preparation for teaching, self-confidence, voice, pronunciation, facial expression and in actual classroom teaching taken as a whole. (ii) The trained teachers were better than the untrained teachers about the aims of the lesson, its appropriateness, its organization, the use of teaching devices, presentation, questioning, answering students' questions, the use of blackboard and other teaching aids, eliciting students cooperation and participation, and effective closure. (iii) There was no significant difference in the competence of the two groups of teachers to manage the classroom discipline and to maintain a congenial climate for the teaching-learning activity. (iv) The two categories of teachers did not differ significantly in maintaining good interpersonal relations, cooperating with the principal, doing office work, guiding students' participation in the activities of associations, committees, community life and co-curricular activities. (v) There was no significant difference between the two categories of teachers in their attitude towards the teaching profession and teacher-pupil relations.

1229. SOHONI, B.K. and others, *A Study of the Development of Teacher Effectiveness through Teaching Practice*, SNDT College of Education for Women, Pune, 1977

The objectives of the investigation were: (i) to find out at which lesson or lessons in the teaching practice period, the teacher's effectiveness in general reached the maximum, (ii) to ascertain if this point of maximum development was the same or different for experienced trainees and freshers and whether this point differed with different school subjects, (iii) to determine the extent of agreement of assessment of the teacher's effective-

ness in general with that when behaviour components were taken together, (iv) to find out if this agreement differed with different subjects and with experienced and fresh trainees, (v) to ascertain if all the behaviour components were equally effective in lessons in different subjects, and (vi) to examine if trainees showed a tendency towards systematic improvement in all behaviour components.

The sample comprised all the 99 trainees who had offered subjects other than home science and Gujarati during 1973-74 in the SNDT College of Education for Women, Pune. One thousand four hundred and fifty-six lessons of the trainees were assessed for data collection. The tool used was a proforma giving twenty-one behaviour components of the teacher's effectiveness to be assessed on a nine-point scale. The lessons were assessed component-wise and also as a whole.

The major findings of the investigation were: (i) The coefficients of correlation obtained between the overall grade and the grade computed on the basis of assessment of components were quite significant in respect of both the experienced and the inexperienced teachers. The relationship was higher in the case of subjects in which subject experts observed higher percentages of lessons. (ii) In the case of experienced teachers, teachers' effectiveness in general reached a limit on sixth, seventh or eighth lesson in all subjects except science. (iii) In the case of inexperienced group, the limit was reached in the seventh or eighth lesson in the case of English, Hindi, Marathi and history. (iv) Teachers' effectiveness reached a limiting value in respect of English, Marathi, Hindi and history in respect of both the experienced and the inexperienced groups in the seventh or eighth lesson. In the case of science for both the groups, teachers' effectiveness reached a limit earlier. (v) In terms of appreciable improvement, which meant teaching grade A and above, in the case of experienced group, science showed the highest percentage frequency. Next in order were geography and mathematics. In the case of inexperienced group, the order was science followed by mathematics. (vi) The commonly observed significant elements of the teacher's effectiveness were: his ability to motivate the class, ability to speak effectively, ability to use blackboard aptly and certain personality maturity. (vii) Certain behaviours such as exposition of the subject matter in an appealing manner, sensitivity to individual differences among pupils and making provision for their differences, relating the topic to other topics and to practical life situations, setting problem-solving and emotional assignments, were not attended to by both the groups to the desired extent.

- 1230.** SRIVASTAVA, A.S., *Functional Utility of the Method of Selection for Admission to the B.Ed. Classes of the Colleges Affiliated to Gorakhpur University*, Ph.D. Edu., Avadh U., 1980

The main objective of the study was to have a critical evaluation of the procedure for selection of students for admission to the B.Ed. classes of the colleges affiliated to Gorakhpur University and to suggest a suitable method for such selection.

Opinions regarding the provisions as laid down in the Government order regarding the criteria for admission to the B.Ed. classes were collected from thirty principals of intermediate colleges and thirty headmasters of high schools and twenty heads of the B.Ed. departments of the colleges. Data were collected through personal interviews with the respondents. They were also requested to give suggestions for the improvement of the procedure for admissions.

The main findings of the study were: (i) By limiting the number of seats and fixing the teacher-pupil ratio in the colleges the quality of training had improved. (ii) Malpractices in admission had been reduced. (iii) Emphasis on academic record had led to the selection of better candidates. (iv) The new procedure was too lengthy and consequently the process of admission took too long a time. (v) There was overemphasis on academic achievement and other characteristics that could be helpful for teaching were ignored. (vi) Rules regarding attendance had not been fixed. (vii) No rules had been framed to make participating schools available. (viii) The new procedure was too centralized; there was need for greater participation of the local people in the process of admissions.

- 1231.** SRIVASTAVA, N., *Attitude of Secondary School Teachers towards the Teaching of Population Education in Schools*, Ph.D. Edu., Luc. U., 1982

The study aimed at finding out the attitude of secondary school teachers in Lucknow district towards the teaching of population education. The sample consisted of six hundred secondary school teachers randomly selected from the secondary schools of Lucknow district. A Likert type attitude scale was used to measure the attitude of teachers towards population education.

The main findings of the study were: (i) In general, the attitude of the secondary school teachers towards the teaching of population education was favourable. (ii)

The rural teachers had more favourable attitude towards teaching population education than the urban teachers. (iii) The teachers with longer teaching experience were less aware of the need for teaching population education. (iv) There was no marked difference in the attitude of the male and the female teachers towards teaching population education. (v) There was no marked difference in the attitude of the married and the unmarried teachers towards teaching population education. (vi) There was no marked difference in the attitude of the science and the arts teachers towards teaching population education. (vii) The Hindu teachers had more favourable attitude towards teaching population education than the Muslim teachers. (viii) The teachers were classified into three categories as regards their academic qualifications. It was observed that the teachers falling in the middle category had more favourable attitude towards teaching population education than those in the other categories.

- 1232.** SRIVASTAVA, P.K., *The Relationship between Frustration and Teaching Efficiency*, Ph.D. Edu., RSU, 1980

The major objectives of the study were: (i) to estimate the differential level of frustration among different samples of teachers and their corresponding differential impact on their teaching efficiency, and (ii) to examine the effect of induced frustration on teaching efficiency of the practising teachers in the classroom by inducing frustration through different techniques.

The study was completed in two phases. The first phase was named the correlational and differential phase whereas the experimental study was carried out as the second phase. For the first phase two hundred and forty lecturers were drawn on a criterion of cent per cent quota sampling from various higher secondary schools of Bhilai. For the experimental study ninety student-teachers from the Kalyan College of Education, Bhilai, were selected randomly. The sample of the experimental phase of the study was divided into six groups matched for age, sex, qualification, teaching experience and socio-economic status. One of these six groups was named as the control group which was given no treatment whereas the other five were called the experimental groups. Each of the experimental group was given one of the five experimental treatments, i.e. (a) suspension for two days from practice-teaching work for no reason thereof, (b) getting charge-sheet notice without any fault, (c) assignment of extra academic workload be-

sides the regular work, (d) detention before the class without any reason, and (e) getting a verbal warning for shirking from duty though in actuality it was not. Data were collected by employing the Indian adaptation of the Rosenzweig P.F. Study (Udai Pareek), the Teaching Frustration Scale (Sharma and Srivastava) and a scale to measure the teaching efficiency which was developed and standardized by the investigator. The mean, standard deviation, t-test, Wilcoxon Matched Pairs Sign Ranks Test and the product moment correlation were the statistical techniques employed for analysing the data.

The findings of the study were: (i) Frustration induced through the various techniques adversely affected the teaching efficiency of the student-teachers. (ii) Frustration induced through suspension, charge-sheet and detention adversely affected the teaching of the fixative and regressive group, whereas in the case of the aggressive group of student-teachers it had an inverse effect on their teaching efficiency. Similarly, verbal warning had an adverse effect on the teaching efficiency of the aggressively and regressively frustrated group of student-teachers, whereas it had an inverse effect on the fixatively frustrated group. (iii) The lecturers belonging to the high educational attainment group scored significantly higher than those belonging to the low educational attainment group on the measures of teaching efficiency and frustration whereas on these two measures the lecturers with longer or shorter teaching experience as well as those drawing larger or smaller emoluments did not differ significantly. (iv) The older lecturers expressed relatively greater amount of frustration and inferior teaching efficiency than the younger lecturers. (v) The male and the female lecturers did not differ significantly on the measure of teaching efficiency whereas the males exhibited greater amount of frustration than the females. (vi) Frustration and teaching efficiency had a low positive relationship. (vii) There existed a very low positive relationship between the measures of frustration and teaching efficiency of various groups having different lengths of teaching experience; this relationship was linear and went on deteriorating as the teaching experience advanced. (viii) There existed no linear relationship between the frustration and the teaching efficiency of teachers of various age groups.

1233. SRIVASTAVA, U., *A Study of Sense of Responsibility among Secondary School Teachers*, Ph.D. Edu., BHU, 1979

The objectives of the study were: (i) to construct a

scale to measure the sense of responsibility of secondary school teachers, (ii) to measure the sense of responsibility of secondary school teachers of Agra division (U.P.), (iii) to find out variations in the sense of responsibility with respect to some variables, viz., place of residence, age, sex, income, etc., and (iv) to find out the relationship of the sense of responsibility with teachers' attitude towards the teaching profession and teachers' effectiveness.

A sample of 500 urban secondary school teachers was selected from the Agra division of U.P. by employing the incidental purposive sampling technique. The same sample had been broken up on the basis of socio-economic status, marital status, father's education, academic background, salary, teaching experience and political affiliation. The tools used were Sense of Responsibility Scale developed by the investigator, Kumar and Mutha's Teacher Effectiveness Scale and Srivastava and Gupta's Teacher Attitude Inventory. Statistical techniques used for analysing the data were t-test, analysis of variance, product moment coefficients of correlation, partial correlation and multiple regression analysis.

The major findings of the study were: (i) The constructed sense of responsibility scale had five areas of responsibility — firm determination, dutifulness, disciplinarianism, interest in teaching job, and farsightedness. Test-retest reliability of the scale was 0.268 after a gap of three months on a sample of 100 teachers; split-half reliability was 0.824. Intrinsic logical and cross validities were of satisfactory level. (ii) The younger teachers in the age range twenty to thirty years scored the highest and the older teachers in the age range fifty to sixty scored the lowest on the sense of responsibility scale. The sense of responsibility in the teaching profession decreased as age increased. (iii) The unmarried teachers scored significantly higher on the sense of responsibility scale than the married teachers. (iv) The teachers coming from educated families had significantly more sense of responsibility than the teachers belonging to uneducated families. (v) The graduate teachers showed significantly more sense of responsibility than their post-graduate counterparts. (vi) The teachers in the trained graduate grade scored significantly higher on the sense of responsibility scale than the teachers in the post-graduate scale. (vii) The teachers belonging to families having an income of more than Rs.1000 per month scored significantly higher on the sense of responsibility scale than the teachers belonging to families having an income of less than Rs.1000 per month. (viii) The teachers having three to five years of teaching experi-

ence had significantly higher sense of responsibility than those who had more than seven years of teaching experience. (ix) There was no significant difference in the sense of responsibility among the teachers having political affiliation and those having no political affiliation. (x) There was no significant difference in teachers' effectiveness and attitude towards teaching of the teachers working in five different districts of Agra division. (xi) The teachers of Mathura district scored the highest and those of Etah district the lowest on the sense of responsibility scale. (xii) The women teachers showed a higher degree of firm determination than their male counterparts. (xiii) The male teachers scored significantly higher on the characteristic of dutifulness than the female teachers. (xiv) There was no significant difference between the male and the female teachers with respect to disciplinarianism. (xv) The female teachers scored significantly higher on the dimension of far-sightedness than the male teachers. (xvi) The sense of responsibility, teachers' effectiveness and attitude towards teaching were positively and significantly related with one another. (xvii) Multiple regression coefficient of 0.32 indicated that 10.24 per cent variance in the sense of responsibility was accounted for by teachers' effectiveness and attitude towards teaching.

1234. SUJATHA, B.N., *An Enquiry into the Undergraduate Teacher Training Programme in the State of Karnataka*, Ph.D. Edu., Mys. U., 1979

The objectives of the study were: (i) to determine the most desirable set of objectives for teacher education in general and primary teacher education in particular, (ii) to examine to what extent the existing inputs such as the courses of study, the institutional plan, teachers, equipment, etc., were adequate to realize the formulated objectives, and (iii) to evaluate the extent of the efficacy of the programme in preparing competent and efficient teachers in terms of selected areas of teachers' efficiency.

Data were collected through questionnaires and a teacher efficiency inventory. The sample for the questionnaire included 200 experts in the field of education, all the subject inspectors, deputy directors of public instruction, the superintendents of the undergraduate teacher training institutes of Karnataka, and for the teacher efficiency scale, 600 undergraduate teacher trainees. Analysis of the data was based on percentages, coefficient of correlation and critical ratio.

The findings of the study were: (i) The general objec-

tives, in the order of preference, considered important for teacher education in general were: to help pupil-teachers (a) become conversant with the basic theories of teaching and learning and of the learning process, (b) become conversant with the foundations of education, (c) develop a positive attitude towards the teaching profession, (d) acquaint themselves with the meaning of democracy and its implications for education and develop the desire to inculcate these ideals in their pupils, (e) acquire the knowledge of modern evaluation techniques, curriculum planning and development, (f) realize the importance and significance of guidance in schools and also develop skills to offer guidance to pupils, (g) know different types of school organization and administration. (ii) The objectives considered significant for undergraduate teacher education in the order of preference were: to help pupil-teachers (a) acquire the knowledge of the developmental needs of the elementary school children at the various stages of growth, (b) acquire the knowledge of aims and objectives of primary education in general and the specific objectives of teaching school subjects at the primary level, (c) have an adequate acquaintance with the content of the different subjects of the school syllabus they were expected to teach, (d) develop and use instructional materials including audio-visual aids, (e) realize the need and importance of work experience and acquire proficiency in some crafts, (f) contrive and use a variety of effective teaching-learning procedures suited to primary school children, (g) be active participants in community activities like adult education, PTA, etc., and (h) have the knowledge of various co-curricular activities suited to the primary school children and make them capable of organizing, supervising and participating in such activities. (iii) Seventy per cent supervisors and 65 per cent superintendents felt that the curricular offerings were only just adequate to attain the objectives. (iv) The facilities provided in the teacher training institutes in respect of teaching personnel, admission procedure, institutional plant, time allotment to the teaching of different subjects and practice teaching were not adequate to carry out the curricular programme effectively. (v) The performance of the trainees in the teacher's efficiency inventory showed that the training programme had failed to develop a teacher of desired quality. The area of professional skill and interest, which should get the highest score on the inventory as it was the best measure of the teacher's efficiency, according to the test constructor, got the fourth place whereas the areas of relationship with others, individual qualities, ability for class management and acquaintance with the principles

of psychology got the first, second, third and fifth places, respectively.

- 1235.** THAKUR, T., *Working Conditions of the Married Women Teachers in the Primary Schools of Assam with special reference to Sibsagar District*, Ph.D. Edu., Gau. U., 1978

The major objectives of the study were to find out (i) why married women joined a primary school, (ii) whether they were satisfied with their jobs, (iii) how far they could play a dual role successfully, that is, the role of a school teacher and the role of a wife and a mother, and (iv) what were the academic, social and economic problems and difficulties faced by them in their professional career which affected their working conditions?

In all, 500 married women primary school teachers were selected from Sibsagar district in Assam, that is, roughly 61.5 per cent of the total population. The sample represented twenty-four clusters classified according to residence, qualifications, age, family patterns and marital status. In all, twenty-five teachers were selected for case study from these clusters. Data were collected with the help of two questionnaires (one for teachers and the other for head teachers), one opinionnaire (for sub-inspectors of schools), and two interview schedules. Information was also gathered from various other sources like published literature. Teachers were contacted personally to collect data.

The study revealed: (i) The group of teachers under study joined the teaching profession mainly for two reasons, economic and academic. (ii) They were satisfied with their jobs because of three main reasons, academic, social and economic. (iii) They were able to play their dual role successfully. (iv) They encountered many problems and difficulties in performing their role of a working wife mainly in the academic, economic and social areas.

- 1236.** TRIPATHI, S.L., *The Training of Teachers of Basic Schools*, Ph.D. Edu., Vik. U., 1964

The objectives of the investigation were: (i) to study the growth and development of basic training institutions, highlight the weaknesses of administrators, teacher-educators and teacher-trainees and find out the measures to improve the existing state of affairs, (ii) to analyse the discrepancies existing between the theoretical and practical aspects of basic training and remove the

subjectivity from it, (iii) to determine the place of self-dependence, community life, craft and theoretical papers in the curriculum of the institutions imparting training to the teachers of basic schools (basic training), (iv) to highlight the importance of various activities performed by basic teacher training institutions and to suggest effective plans to improve them, (v) to incorporate the various new techniques in the system of basic teacher training institutions in order to improve their organization and administration, (vi) to suggest the possible measures to rectify the various defects of the basic training on the basis of the recommendations of various committees, and (vii) to locate the field of future research in the system of basic teacher training.

The historical method of research was followed in the study along with the techniques of survey research. The sample of the study consisted of the various basic teacher training institutions and basic schools of Bihar, Gujarat, Madhya Pradesh and Maharashtra.

The findings revealed various defects in the different aspects of the existing system of basic teacher training institutions, such as the crafts, production, self-dependence, literature, curriculum, enrolment, evaluation, administration, training, etc., on the basis of which the following suggestions were made: (i) The selection of crafts should be done in accordance with the needs of the country, locality and of the times. The crafts should necessarily be productive and should meet the basic necessities of life. If an institution successfully handles one main craft and two subsidiary crafts it should be given a certificate of efficiency. (ii) The correlation technique of teaching should be encouraged keeping the society and the nature in focus. There should be three types of correlations, namely, principal correlation, supplementary correlation and materialistic correlation, and the teacher-trainees be given training in each of these. (iii) In order to make the teacher-training institutions self-dependent in production, there should be improvement in their planning; basic teacher training institutions should be made residential; specific proforma should be used in evaluating the production of basic teacher training institutions; meritorious students should be rewarded, and a state-level exhibition of the products of basic teacher training institutions should be held. (iv) The basic training institutes should have a definite and well-organized curriculum with integration among the various subjects included in the curriculum. The proposed curriculum for the teacher-trainees for basic schools were theory papers pertaining to principles of education, child psychology, techniques of teaching crafts and methods of teaching various school subjects.

Practicals should include thirty lessons, well supervised, and cover model and evaluation lessons, craft work for an hour a day, study of a problem child, five assignments, participation in sports and N.S.A. programme, participation in the hostel administration and administration of the basic training institution and attendance at a camp related to community service for a period of ten days. (v) In order to equip the institution with reading material on basic education, the States should invite reputed authors to produce reference books for this purpose. (vi) Wastage and stagnation should be checked by making admissions selective, giving scholarships to only those who deserve them and are honest and capable of profiting from them and the trainee should be retained in the teaching profession for a period of five years from the time of training. (vii) The evaluation of the teacher-trainees of basic training institutions should be done in such a way that it evaluates the various aspects of their training such as theoretical knowledge, behaviour within the institutions and in the society and all other matters of importance. External and internal evaluation should be done keeping in view the requirement of the particular aspect of the curriculum. (viii) Teacher-trainees should be given training in improving their administrative efficiency. (ix) Workshops, seminars, symposiums, etc., should be organized in order to reorient teacher-trainees to the emerging trends.

1237. VERMA, D.R., *A Study of Teacher Training as a Catalyst of Change in Professional Attitudes of Student-teachers*, Ph.D. Edu., BHU, 1979

The objectives of the investigation were: (i) to find out the nature and extent of change in the professional attitude of teacher trainees as a result of teacher training programme, (ii) to find out the relationship of age, sex, marital status, caste, income of the family, source of income of the family, family size, rural-urban background, parental education, place of education, academic qualification, subject of study, presence of a teacher-member in the family, pre-training teaching experience, place of stay during education period, educational institutions attended, political affiliation and party affiliation with their professional attitude change, and (iii) to construct and standardize a teacher attitude inventory and develop norms for it.

Twenty hypotheses in relation to the variables selected were formulated in null form for testing the significance of difference. The study was planned on a single group pretest- posttest design. The sample con-

sisted of 500 student-teachers undergoing training in seven teacher training institutions of Varanasi, Ghazipur, Jaunpur and Mirzapur districts of Uttar Pradesh. The same sample had been broken up on the basis of sex, marital status, rural-urban background, academic background, political affiliation, etc., to verify the hypotheses. The tools used were Teacher Attitude Inventory prepared and standardized by the investigator, Follow-up Questionnaire, Personal Data Sheet and Instructor Rating Questionnaire. Statistical techniques used for data analysis were chi-square test, F-test, critical ratio and product moment coefficient of correlation.

The major findings of the investigation were: (i) The Teacher Attitude Inventory constructed by the investigator consisted of 120 Likert-type items. The validity coefficient of the inventory was 0.69 by correlating it with the teaching effectiveness score. The split-half reliability of the inventory was 0.93 and test-retest reliability 0.63. (ii) The teacher training programme was a catalyst of change in the professional attitudes of the teacher-trainees. (iii) Sex, age, marital status, caste, rural-urban residence, income of the family, source of income of the family, size of the family, parental education, presence of a teacher-member in the family, political affiliation, party affiliation, academic qualification, courses of study of the teacher-trainees were not correlated with their attitudinal change. (iv) Pre-training teaching experience, place of graduation and post-graduation and the teacher training institutions attended by the teacher-trainees were significantly correlated with their attitudinal change. (v) The teacher training programme was very effective for attitudinal change of those teacher-trainees who had got pre-training teaching experience of one year or less. It was less fruitful to freshers and almost useless to teacher-trainees with pre-training teaching experience of more than five years. (vi) The teacher training programme was more effective for attitudinal change among the trainees who had completed their education privately and also those trainees who had come from families where the source of income was business.

***1238.** VIDYARTHI, H.S.L., *A Study of the Problems of Retired Primary and Higher Secondary School Teachers of Basti District (1960-75)*, Ph.D. Edu., Gor. U., 1978

The study aimed at exploring the problems of retired primary and higher secondary school teachers of Basti

district who retired under compulsory retirement schemes between the years 1960 and 1975 in five problem areas, namely, (i) psychological, (ii) physical, (iii) economic, (iv) social, and (v) cultural.

In all, 210 primary and higher secondary school teachers of the district of Basti who retired between the years 1960 and 1975 and were available as respondents, formed the sample. An interview schedule was mainly used to explore the problems of retired teachers. Descriptive statistics, such as classification, grouping and ranking were used.

The main conclusions of the study were: (i) The life of a majority of the retired teachers was not entirely lazy. It had mixed flavour of pleasure and pain. (ii) Most of the teachers retired unprepared for post-retirement life. (iii) The problems of incomplete education of their wards, their unemployment, marriage of their daughters, treatment by their second wives and daughters-in-law, disrespect and disobedience, negligence of serious decisions, carelessness about useful suggestions, aping the western values of life by youngsters, routine quarrels, were some of the miseries which the teachers had to bear in their retirement. (iv) Drinking, smoking, non-vegetarian diet, unhealthy competition, individualistic attitude, a mad run for materialistic gains, accelerated aging had reduced the span of life. (v) Apart from deterioration in the position in the family, their social status also fell. The government, the department (officers and clerks), managers, college principals/headmasters and colleagues showed an indifferent attitude in the matter of needs of the teachers who were in retirement.

1239. VORA, J.I., *An Investigation into Social Maturity of Students of Colleges of Education in the Context of Some Psycho-socio Correlates*, Ph.D. Edu., SPU, 1980

The major objectives of the investigation were: (i) to prepare a reliable and valid tool to measure social maturity, (ii) to study the social maturity of B.Ed. students, (iii) to study the social maturity of student-teachers coming from different areas, (iv) to compare the levels of maturity of student-teachers of different sexes, (v) to study the social maturity of student-teachers in relation to their academic background, SES and size of the family, and (vi) to study the social maturity of student-teachers in the context of personality traits, namely, emotional stability, self-sufficiency vs. dependency, suggestibility, rigidity vs. flexibility, and leadership.

The study was carried out in two phases, namely, the construction and standardization of social maturity scale followed by the study of social maturity. The social maturity scale was constructed by using the Thurstone's method of Equal Appearing Intervals. Statements were framed keeping in mind the characteristics of socially matured persons. Eighty-two statements were rated by fifty judges. Out of eighty-two statements, forty-five statements were selected for inclusion in the pilot form of the scale. The pilot form was administered to 168 student-teachers selected at random. The statements for inclusion in the final form were selected on the basis of T-values. Of the forty-five statements, forty-three statements were selected. The final form was administered to 855 student-teachers selected from colleges affiliated to Gujarat University, South Gujarat University, Saurashtra University and M.S. University. The reliability coefficient established by test-retest method, split-half method, K-R 21 formula and analysis of variance approach ranged between 0.82 and 0.89. Separate percentile norms for urban and rural male and female student-teachers were found. In order to study social maturity in relation to other factors under study $2 \times 2 \times 2$ factorial designs were contemplated and data were analysed and subjected to statistical treatment by using analysis of variance.

The major findings of the investigation were: (i) The student-teachers coming from the urban area were more mature than the student-teachers from the rural area. (ii) The male student-teachers were superior to the female student-teachers in social maturity. (iii) Age had no relation with social maturity. (iv) The commerce graduates were, by and large, more socially mature than the arts and science graduates. (v) The higher the socio-economic status, the better was the social maturity. (vi) The size of the family had no relation with the social maturity of the student-teachers. (vii) There was a close and effective relationship between social maturity and emotional stability. The higher the emotional stability, the better was the social maturity. (viii) The self-sufficient group scored higher on social maturity than the dependent group. (ix) The highly suggestible persons were less socially mature than the less suggestible ones. (x) Social maturity was not related to the trait of flexibility vs. rigidity. (xi) The persons having good leadership qualities scored higher on social maturity than those with poor leadership qualities.

1240. WADHAWAN, C.L., *School Teachers in Delhi: Relationship between Their Social Background*

and Professionalization, Ph.D. Edu., JMI, 1980

The objectives of the study were: (i) to find out the socio-economic and cultural background of higher secondary school teachers, (ii) to find out the degree of their professionalization, and (iii) to analyse the relationship between their social background and degree of professionalism.

The sample included teachers from three types of schools, namely government schools, aided schools and unaided schools. Thirty government schools, thirteen aided and five unaided schools were selected. From these forty-eight schools, 50 per cent of the total number of teachers were selected. Thus the sample comprised 536 teachers (PGTs and TGTs). Only 375 out of the 536 teachers returned the questionnaire, which was the only tool used to gather data.

The findings of the study were: (i) The largest number of teachers, forming 46 per cent belonged to lower middle class; 52 per cent lived in rented houses; 74 per cent had a cycle as a mode of transport. (ii) Forty-one per cent male teachers and 64 per cent female teachers had urban background. (iii) A majority of the teachers (58 per cent) had nuclear families. (iv) The social background of the female teachers was better than that of their male counterparts. (v) The academic and professional achievements of the teachers showed that they were generally of mediocre intellectual status. (vi) The teachers were not benefited significantly by the in-service programmes. (vii) A sizable number of teachers (46 per cent) considered teaching more satisfying than most other careers, but not the most satisfying. (viii) The male teachers were more professional than their female counterparts. (ix) About 50 per cent teachers opined that parents did not help their wards in their homework. (x) A majority of the male and the female teachers rated as average the staff rooms, material aids for teaching, school discipline, academic reputation of the school in the locality and encouragement to innovative teachers. (xi) Ninety-nine per cent teachers gave poor evaluation of their principals. (xii) Forty-six per cent male and 53 per cent female teachers gave average rating to the general mental ability of teachers. (xiii) There was positive and significant relationship between professional and general environment of the school and the degree of job satisfaction.

- *1241. YADAV, R.A., *A Study of the Effect of Training for Classroom Questioning Behaviour on Teaching Competence and Pupil Achievement,*

Ph.D., Edu., Mee. U., 1983

The main objectives of the study were: (i) to compare the classroom questioning behaviour (CQB) of student-teachers before and after training for CQB in the experimental and control groups, (ii) to compare the teaching competence of student-teachers with and without training for CQB, and (iii) to compare pupils' achievement in science at cognitive memory, convergent application, divergent application and evaluation levels as well as total achievement under groups of student-teachers with and without CQB training.

The pretest-posttest control group design was employed in two phases over 40 student-teachers and 811 pupils of Class IX. The number of pupils in the experimental group was 403 and in the control group 408. The tools used were Prayag Mehta's Group Intelligence Test, and Achievement Test, Teaching Assessment Battery Form O by Jangira and CQB Observation System developed by Jangira. The t-test was applied to test the significance of difference.

The major findings of the study were: (i) The student-teachers with CQB tended to increase the incidence of questions at higher levels. (ii) The training in CQB helped in improving the structural characteristics, namely, relevance, precision, grammatical correctness and clarity of questioning. (iii) The CQB training resulted in improved question delivery behaviours and question distribution behaviours of student-teachers. (iv) The training resulted in improvement in pupil response management behaviours and teaching competence.

1242. YESHODHARA, K., *A Study of Some Attitudinal and Proficiency Changes Achieved through Education, Ph.D. Edu., Mys. U., 1979*

The study was designed to find out (i) the changes in the selected attitudes and proficiencies brought about in student-teachers through the pre-service teacher education programme, (ii) the extent to which intelligence, social intelligence, subject scholarship and sex (taken separately) affect the changes in respect of the attitudes and proficiencies, and (iii) the extent of interaction effect of intelligence and subject scholarship, and social intelligence and sex on the changes, if any, brought about in respect of the attitudes and proficiencies.

The study employed both the experimental and correlational approaches. The sample for the study included

310 student-teachers drawn from six colleges of education affiliated to the University of Mysore. The whole B.Ed. programme was considered the experimental treatment variable. A pretest-posttest single group design was employed. The criterion variables were attitudes towards teaching as a profession, students in general, school work as a whole, professional growth and proficiencies in classroom instruction, lesson planning and test construction. The criterion variables were measured using the Mysore Teacher Attitude Scales (Nayar) and the Mysore Teacher Assessment Tools (Nayar). The predictor variables were intelligence measured on Nafde's Non-verbal Intelligence Test, social intelligence on the Mysore Social Intelligence Test, subject scholarship in terms of marks in the subjects of specialization obtained in the qualifying examination and sex. One tailed t-test, one-way and two-way analysis of variance, chi-square test and contingency coefficient were employed to test the various hypotheses.

The findings of the study were: (i) The student-teachers made significant gains in each of the four attitudes and three proficiencies in all the six colleges of

education, although there were institutional differences.

(ii) There was significant positive relationship between the initial and final positions of the student-teachers on each of the attitudes and proficiencies. (iii) Intelligence was significantly related to the final attitude towards school in general and towards school work but not to the attitude towards teaching as a profession and professional growth. (iv) Social intelligence was related to all the attitudes except professional growth. (v) Subject scholarship was related to only one of the four attitudes, namely, attitude towards school in general. (vi) Intelligence was significantly related to the final status of the three proficiencies. (vii) Both social intelligence and subject scholarship were significantly related to the final level of two proficiencies — classroom instruction and lesson planning. (viii) The effect of intelligence was on gains in attitude towards school work and proficiency in classroom instruction. (ix) Social intelligence positively affected attitude towards school in general and negatively affected proficiencies in classroom instruction and test construction. (x) Subject scholarship had significant effect on all the three proficiencies but not on any of the attitudes.