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Symposium on Teacher Education in India: Introduction

Jagmohan Singh RAJPUT
National Council of Educational Research and Training, India

To gain a correct perspective of teacher education in India, one has to take into consideration the school education system in the country. India has nearly 0.598 million primary schools, 0.176 million elementary schools, and 98,000 secondary schools, with about 1,300 elementary teacher institutions and more than 800 secondary teacher institutions. The teaching force is about 4.5 million-strong, among which nearly three millions are employed at the elementary level. The percentage of trained teachers is approximately 90%; though in some of the regions, there are a significant number of untrained teachers.

To cater to the training need of such a massive number of teachers through pre- and in-service training in India is a mind-boggling task. Currently, this is being accomplished by nearly 2,100 teacher education institutions at the state and district levels. Besides, there are national institutions, such as the National Council of Educational Research and Training (NCERT), National Institute of Educational Planning and Administration (NIEPA), Central Board of Secondary Education (CBSE), National Open School (NOS), and Indira Gandhi National Open University (IGNOU), which offer teacher development programs for key resource persons and senior teacher educators.

Education was a state subject till it was brought on the concurrent list by the 42nd constitutional amendment in 1976. The constitutional amendment relating to Panchayat Raj (local bodies) of 1993 prescribes the decentralization of planning and administration of school education and teacher education. The two constitutional amendments above have made education and teacher education critical factors in the Indian educational context, particularly after
the constitutional amendment initiated in 2001 makes primary education a fundamental right of the children in India.

The aforesaid changes have considerable implications. One of which is the decentralization of planning and administration of teacher education. There are other features, which are equally important. Pre- and in-service categories as two sub-systems of teacher development have to be seen as inseparable parts. This thinking has resulted into the establishment of bimodal institutions like colleges of teacher education and institutes of advance studies in education. Thus, one can witness in India a chain of bimodal institutions, from district to state level, in the form of district institute of education and training, college of teacher education, and institute of advance studies in education.

Stage-specific teacher education has been receiving serious attention in India. At the moment, there are separate programs for each stage: one for pre-primary teachers; the second elementary teachers; and third secondary teachers. There is a great debate going on in the country to have at least two more categories of programs - one for primary teachers (teachers teaching class 1-5) and one for teachers who are teaching senior secondary classes (i.e., 11th and 12th). Specific policy actions, however, have yet to be taken.

There are several gap areas in teacher education to be attended to. Indian educationists are critically thinking of the enhancement of culture-specific pedagogies, such as puppetry, folk plays, and story telling, which can be used for different target group of learners; after all, the child in the tribal society processes information differently from the child in metropolitan city. However, perceivable change in teacher education curriculum in this direction is yet to become visible.

The isolation of teacher education is another area deserving attention. Institutions of primary teacher education are totally disconnected from universities. Although there are some exceptions, like the Delhi University, which prepares primary teachers through a university-based program, such programs need to be multiplied. Isolation of teacher education institutions from actual school situation has a crippling effect. The “reality” situations of the schools are often not considered by teacher education institutions with the result that teacher education programs often evolve in the theory domain, far removed from the reality. Thus, there is a strong demand to build a reality-based teacher education by establishing an interwoven connection between
teacher education institutions and schools on one the one hand and universities on the other.

This symposium presents a broad picture of the Indian teacher education system, although it does not claim to be exhaustive. With four significant aspects being consciously selected to paint a comprehensive picture of teacher education in India, the themes covered are profile of teacher educators, professionalism of teachers, reforms and restructuring in-service teacher education, and teacher education through distance learning. In brief, the first paper relates to profile of teacher educators. The study of their profile is significant for quality enhancement. Teacher professionalism is the focus of the second paper. There is an ongoing debate in India on whether or not teacher education is a profession like medicine or law. Convincing answers are therefore essential to further developing the teaching profession. The third paper is on in-service education, which has now become a critically important area of teacher development. The theme of the fourth paper is that of information and communications technologies and distance education playing an important role in school and university education and having an important role in teacher education too. Teacher recruitment, their status, and teacher education and development are critical inputs for quality education. Teacher selection, teacher competence, their motivation, and their conditions of work directly impinge on teacher performance, which positively influences students learning. All these macro-level factors and issues are touched upon in the symposium in a systematic manner.

In detail, the first paper, on Indian teacher educator profile by Kiran Walia, serves to present empirical data about Indian teacher educators’ teaching and their needs. Teacher educators create a multiplier effect. It has been felt that special attention should be paid to the recruitment and upgrading to the skills of teacher educators (United Nations Educational, Science and Cultural Organization [UNESCO], 1996) so that they can fully play their role in the ultimate renewal of educational practice in the classroom. Keeping in view the importance of the role of teacher educators, who are in the position to infuse dynamism competency and commitment in teachers, the National Council of Teacher Education undertook in 1997-98 a countrywide study on the profile of teacher educators. The study was designed to collect information to form a basis for drawing research and practical implications. Relevant findings are recorded in Walia’s paper. It is interesting to note here that, with respect to publication, the study has revealed that only 9% of elementary teacher
educators had published research papers, even though nearly 90% of the teacher educators surveyed felt that their professional competency had increased. Further, with respect to pedagogy, 50% of the teacher educators had reported that, by attending in-service programs, they had acquired skills in new methods of classroom teaching.

One of the important findings of the study is that Indian teacher educators are experiencing a problem of the insufficiency of supply in teaching learning materials. This finding has a very important message for nodal agencies like NCERT, NIEPA, and NOS, which should equip elementary level teacher education institutions with adequate supply of suitable learning materials. Other findings of importance in improving the quality of Indian teacher educators’ teaching are presented in Walia’s paper.

The paper on teacher professionalism in India, prepared by J. S. Rajput, begins with the description of the progress of Indian education, followed by the progress of teacher education. Discussed in the paper are various parameters of a profession, such as the use of intellectual techniques, long period of specialist training, and broad range of autonomy. The concept of service, rather than economic returns, constitutes a major aspect of a profession. Recent policy initiatives seem to promote and ensure decentralization, community collaboration, and institutional networking. The issue of para-teachers, which has both positive and negative sides, is unique, of which has been discussed in the paper in detail. There is now a need to review the various aspects of para-teachers within the context of unemployed trained teachers. Rajput’s paper discusses the institutional arrangements presently in vogue for teacher education in the country with a special reference to district institute of education and training, college of teacher education, institute of advance studies in education, and the State Council of Educational Research and Training.

The paper on in-service teacher education, prepared by O. S. Dewal, takes a systems perspective and presents teacher development in the context of enhancing student learning. It perceives pre-service, in-service, and self-directed lifelong learning contributing to the empowerment of the teacher, which has a direct bearing on better classroom teaching. In self-explanatory diagrams, the author highlights the point that, in addition to good classroom teaching, student learning also depends upon students, aspiration, self-concept, peer interaction, and previous learning. The point that classroom teaching also
indirectly influences some of those factors, which reside within the learner, has been adequately emphasized.

The paper also shows that teacher development as a complex and composite activity comprises pre-service education, induction, in-service teacher education, school experiences, self-directed lifelong learning, and provision of institutional opportunities for teacher development. It identifies some significant milestones in in-service teacher education starting from creation of a films unit in the Ministry of Education in the 1940s, to the creation of Gyan Vani, an audio channel dedicated to education and development in 2001. The paper highlights various aspects of in-service teacher education relating to the target group, locale, content, and transactional strategy, and discusses main models, namely face-to-face, cascade, and distance mode, by giving a few relevant examples. One of the attractive features of this paper is that a context-input-process-product model of evaluation of in-service programs has been suggested, of which may help make INSET evaluation fool-proof and rigorous.

Santosh Panda's paper gives an overview of the history of Indian teacher education through distance learning. The paper, which shows that there is a bright future for distance learning, also discusses the nature of modularization and course development strategies, which are adopted by almost all distance-teaching institutions. It may be mentioned here that a joint-project by IGNOU and NCERT on child guidance was initiated in 1993 and is still continuing. It is a diploma course emphasizing four major areas, namely, understanding elementary school child, facilitating growth and development, guiding children's learning, and guiding socio-emotional development of a child. Besides, this distance teaching program has a personal contact component. With the success of this project, there are now plans to have more projects of collaborative nature between NCERT and IGNOU.

All in all, this symposium on Indian teacher education and development serves to provide a basis for educators, researchers, and policy-makers in both India and other developing countries to share some valuable experiences accumulated in the current reform context of India. It is hopeful that the findings, insights, and propositions so presented would facilitate stakeholders' further reforms in enhancing the quality of school education and teacher education. Then, to keep readers posted of the recent important developments in Indian teacher education, there is the need to mention here is that of the emphasis being given by NCERT to competency-based and commitment-
oriented teacher education. This author and Prof. R. H. Dave, the former Director of IIE UNESCO, and in consultation with many teacher educators in India, have developed ten areas of competencies where pre-service education should primarily concentrate on. The theory-driven and knowledge-based examination of these areas of competencies, which NCERT is presently engaged, however, is still in progress and thus could not be reported in this symposium. The eventual reporting will generate a substantial impact upon the nature, essence, and directions of the work of Indian teacher education. Meanwhile, it is hopeful that the ideas, insights, and findings presented in the four papers do furnish a basis for readers to appreciate the complexity and ramifications of teacher education reform in India.

REFERENCES


Symposium

Profile of Teacher Educators in India

Kiran WALIA¹
Department of Teacher Education
National Council of Educational Research and Training, India

Abstract

Research on Indian teacher educators, who play a pivotal role in the provision of competent school teachers, is meager. A survey study was therefore conducted to enhance a better understanding of Indian teacher educators. The findings together furnish a sketch of the profile of Indian teacher educators, which is rather similar to the profile of teacher educators in many other countries. The findings also highlight the tremendous tasks to be undertaken in, for example, improving teacher education institutions, selecting student teachers, developing curriculum, and enhancing the performance of teacher educators, with all of these pointing to the fact that Indian teacher education and teacher educators are in need of support for further improvement.

Educational development in India has been impressive in recent years. The expansion of educational institutions and increased enrolments of students as well as other factors have led to a consistent concern for the quality of teacher education (Rajput & Walia, 1998). Such a concern eventually leads to considerable changes in the content and process of Indian teacher education in the past few years, mainly brought about by government schemes and policies.

TEACHER EDUCATION IN THE INDIAN EDUCATIONAL CONTEXT

After India’s gaining independence five decades ago, teacher education has come a long way, with several efforts made to enhance quality teacher education: for example, the expansion of pre-service and in-service education and the clearing of the backlog of untrained teachers. Formulated in 1986, the
National Policy on Education recommended the overhauling of teacher education in India. The corresponding “Programme of Action 1986” stated: “Keeping in view the central place of teacher education National Policy on Education calls for its overhaul as the first step towards educational reorganization” (Government of India, 1986, p.187). Initially, teacher education institutions were established by the government; then private (both aided and unaided) tertiary institutions have been imparting teacher education. In most of the states in India, elementary teacher education program is of two year duration after 12 years of schooling while secondary teacher education program is of one year duration for university graduates. On experimental basis, secondary teacher education programs of two-year duration have been implemented in five institutions. Further, the National Council of Educational Research and Training provides four-year integrated courses after 12 years of schooling leading to B.Sc. or B.Ed. degree.

Notwithstanding the reform efforts expended, the job remains challenging in the Indian education context. In brief, while India contributes 16% of world’s total population and there are as many as 325 languages and dialects, it spends 3.77% of its GNP on education and 48% of adult population are illiterates (Government of India, 2003). The national goals are to achieve universalization of elementary education and to complete the eradication of illiteracy. Yet, an overview of the number of schools, teachers, teacher education institutions, and student teachers denote the enormous expanse teacher education has to deal with (see, e.g., Walia, 2001). Over and above is the grave problem of training the untrained teachers. There are 1 million schools, 5 million teachers, nearly 1,300 elementary and 900 secondary teacher education institutions and approximately 35,000 teacher educators.

The National Council of Educational Research and Training was established in 1961. It provides professional inputs to state level organizations and institutes for school education; it also undertakes programs for enhancing quality of teacher education in the country. It conducts research, surveys, develops teaching-learning materials, and organizes in-service programs for teacher educators.

The National Council for Teacher Education (NCTE) was established by an Act of Parliament of 1993 for achieving planned and coordinated development and ensuring proper maintenance of norms and standards in teacher education of the country. NCTE has been successful in streamlining secondary teacher
education programs through correspondence courses/distance education which were found deteriorating the quality of teacher education (Walia, 2001).

District Institutes of Education and Training (DIETs) were established for providing pre-service and in-service education at elementary level and to enrich professional support and guidance (for details, see Government of India, 1992). In addition, Institutes of Advanced Studies in Education (IASE) have been envisaged to provide professional support and guidance to elementary and secondary teacher education institutions and conduct researches and develop teaching learning material. A State Council of Educational Research and Training (SCERT) is established in every state and also organizes in-service programs for teacher educators. As India is a federal state and has 36 states/union territories, and thus 36 SCERTs are in operation.

THE IMPORTANCE OF TEACHER EDUCATORS

Teaching is a multi-dimensional and complex activity and requires teachers to be prepared for facing the new demands and challenges (Esteve, 2000). Teacher education is a vital component in the entire education system, and hence due importance must be given to the process of its continuous renewal and upgradation. Inevitably, teacher educators are a part and parcel of this renewal process. After all, the quality of education largely depends on the quality of teachers and the provision of these quality teachers depends on the availability of high quality teacher educators, who fulfill a very important function in preparing the next generations for the nations’ teachers (Reynolds, 1995). Therefore, the selection of teacher educators is very crucial as they prepare the prospective teachers who in turn shape future generations. The vital human element in teacher education is the teacher educator, who can infuse vitality, dynamism, competency and commitment in the student teacher. Indeed, the Report to UNESCO of the International Commission on Education for twenty-first century (United Nations Educational, Scientific and Culture Organization [UNESCO], 1996a) has also emphasized that there should be special focus on the recruitment and upgrading of skills of teacher educators, so that they can fully play their roles in the ultimate renewal of educational practice.
or she has to be sensitized to the continuous changes in the educational context that have a direct bearing on the role and functions of teacher educators. This critical need must be met, because there are various social, economic, cultural, and environmental challenges that must be faced by different societies. Invariably, school teachers must understand the nature of those changes and challenges “... and be able, within the context of their teaching responsibilities, to equip students to help society respond to them” (UNESCO, 1997). Unfortunately, while teacher educators are spending most of their time teaching pedagogy, transacting the curriculum, “little or no time is spent preparing trainee teachers for their real life difficult contexts” (UNESCO, 1998). This is a problem that must be rectified as teacher educators have to take the lead and play a major role in societal development of the future. In short, given the job demands, teacher educators must be competent (NCTE, 1999) and well prepared for discharging their duties in the current challenging context.

In India, little research has been done on teacher educators (Walia, 2001). This indicates the insignificance given to teacher educators by researchers. Inevitably, there is a dire need for sizeable and significant literature on teacher educators, as they shape the future teachers. The efficiency of teacher education institutions depends solely on the commitment and performance of teacher educators. The first and foremost responsibility of teacher educators is to prepare competent school teachers and for this teacher educators must themselves be capable teachers (Watts, 1984). The Ramamurthi Committee formed in 1990 for the Review of National Policy on Education (1986) envisaged the following profile of a teacher educator: they should preferably belong to the cadre of school teachers and must have experienced the system at least for a few years; they should also have exposure to the outside world at large in order to acquire a broader perspective; they should be of high academic competence and should possess an integrated view of knowledge and conviction in the interventionist role of education; they should have a historical and socio-economic understanding of the problem and issues faced by Indian society, as also the world; they should have empathy and burning concern for the under privileged; they should have competence for research and an aptitude for using research as a powerful tool for educational and social development; and they should have personal attributes, such as ability to think and work with a sense of independence, ability to act against the prevalent or populist opinion, ability to convince and catalyze people, ability to lead both by precept and practice, ability for creative and sustained action, ability to
mobilize resources, both human and financial, from within and outside the community, ability to work with different segments society, including the government, and a high motivation for need achievement (inclusive of a desire to achieve, ability to work even at the presence of demotivating factors, a willingness to accept responsibility and feel accountable, and high interpersonal skills).

Given that teacher educators play a pivotal role in educational reform for meeting environmental challenges faced by India, that high standards are set for teacher educators, and that continuous reform of teacher education is needed to ensure the provision of quality teachers, it is thus imperative for reformers to first of all be in possession of a full understanding of teacher educators so that the reforms so formulated are practical and effective.

PROFILE OF INDIAN TEACHER EDUCATORS

To address the need, this author took up an extensive national level research study in 1999 on the profile of teacher educators. The purpose of the study was to seek information from teacher educators about themselves as well as their work and needs. In brief, the foci of the study were on the main characteristics of elementary and secondary teacher educators in terms of gender, age, rural-urban, educational and professional background, occupation of parents, etc.; on the publication of research papers, articles, books by teacher educators; their perception on the need and utility of in-service programs; their views on institutional facilities; their extent of library utilization; their participation in co-curricular activities; their perception of updating their content and pedagogical knowledge and skills; and their suggestions for improving the performance of teacher educators and improving the quality of teacher education institutions.

A questionnaire was administered to teacher educators responsible for elementary or secondary school teachers. The questionnaire, with items of rating scale and check-list types, as well as some open-ended and close-ended type, consisted of 58 items. The questionnaires were sent to 900 teacher educators placed in the 32 states of the country. With 327 completed questionnaires returned, the return rate was 36%; the sample consisted of 150 elementary and 177 secondary teacher educators drawn from 24 states.
As mentioned earlier, it is imperative for reformers to first of all be in possession of a full understanding of teacher educators so that the reforms so formulated are practical and effective. Relevant to enhancing such a full understanding are the following key findings from the survey.

**Gender, Marital Status, and Parental Occupation**

Regarding gender and marital status, while female teacher educators are growing in quantity every year, the fact remains that teacher education is largely dominated by males - 65.3% are males and 34.7% females in elementary teacher education institutions and 55.4% males and 44.6% females in secondary teacher education institutions, while 88% of teacher educators are married. These India data match those recorded in some international studies (see, e.g., Durchame, 1993), which have indicated that the proportion of male teacher educators is substantially higher than female teacher educators.

Regarding parental occupation of teacher educators, the questionnaire of the survey had five occupation areas - agriculture, business, private service, teaching profession, and government service – for respondents to choose from. The finding is that 30% of the respondents’ fathers were agriculturists, 29% in private service, 13% in the teaching profession, and 10% in business (the lowest). Researches in India and abroad have found that the majority of the teachers and teacher educators come from the working class and low income group (see, e.g., Carter, 1981; Fuller & Brown, 1975; Raina, 1998; UNESCO, 1996a). The survey reported here indeed indicates the same.

**Academic and Professional Qualifications**

Regarding Academic and professional qualifications, only 23% of male elementary teacher educators were found to be first class honor graduates, while the remaining 77% were second class honor graduates. Then, 88% female elementary teacher educators were second class honor graduates. Similarly, higher percentage of postgraduate degree holders were second class honor graduates. These survey findings reveal that the majority of the brightest graduate and postgraduate degree holders did not join the teaching profession. In self-reported subject specialization like physical sciences and social sciences, the percentage of males was higher than females while in languages the proportion of females was higher. On the whole, 48% of elementary teacher educators had social sciences and languages as their subject of
specialization. Regarding professional qualifications of elementary teacher educators, 41% had B.Ed. and M.Ed. degrees, 10% M.Phil., and 7% Ph.D. in Education.

Among the secondary teacher educators, 33% were first class honor graduates and 67% were second class. Similar to elementary teacher educators, the proportion of secondary teacher educators having second class honor degree is much higher when compared to first class degree holders. Further, as many as 78% had languages, social science, education, and/or commerce as their subject of specialization, while 22% had mathematics and science as their specialization. Pertaining to professional qualifications of secondary teacher educators, 13% had B.Ed. or BP.Ed degree, 34% M.Ed. or MP.Ed, 6% M.Phil., and 56% Ph.D.

Publication of Research Papers, Articles, and Books

Regarding the publication of research papers, articles and books, researches in India and abroad reveal that teacher educators prefer to spend more time and energy in teaching than in publishing despite the “publish or perish” pressure. In the case of India, the survey shows that only 9% elementary teacher educators had one to five published research papers to their credit while 25% secondary teacher educators had published one to five research papers in the last five years. Regarding published articles, only 20% of elementary teacher educators had one to five articles published and 54% secondary teacher educators had their articles published. Then, 83% elementary teacher educators and 63% secondary teacher educators had never published a book. All these findings indicate the lack of interest of teacher educators in publishing articles and books. It will be interesting to identify the causes of this disinterestedness. Recognizing the presence of this deficiency, some respondents had made suggestions as to how their contribution towards publishing articles/papers could be facilitated: for example, “There is the need for the library to procure more research journals in the area of interest and acquire latest books both Indian and foreign”; “Generous finance should be provided for research projects undertaken by teacher educators”; “Every teacher education institution must have frequent seminars in which teacher educators could get opportunity to present at least two papers in a year”; “Internet facilities should be set up in every institution”; and “Promotions should be linked with publication
In relation to the above suggestion concerning the need for libraries to purchase more research-supportive materials, it is interesting to note that, from the survey, the extent of library visits and facilities is hardly impressive. In brief, among elementary and secondary teacher educators, 39% and 43%, respectively, used the library “very much”; 50% elementary and 51% secondary used it “when needed”; 7% elementary and 4% secondary used the library “occasionally”; and 4% elementary and 2% secondary used it “hardly.” When more than 50% of teacher educators visited the library only “when needed,” one would suspect that teacher educators generally lack an interest in continuous and life long learning. But then, of course, another factor is at work: While 62% elementary and 71% secondary teacher educators found the library in their institution “good enough” to meet their needs, 38% elementary and 29% secondary teacher educators were not satisfied with the library facilities – due to the lack of latest reading material, the abundance of outdated books, absence of reading room facilities, and non-availability of foreign journals – and thus they tended not to use the library facilities unless warranted.

Then, related to the aforementioned issues of library facilities were the issue of inadequacy of supply of teaching-learning materials - when respondents were asked whether or teaching-learning materials were made sufficiently available in their institution, 33% of elementary and similar percentage of secondary teacher educators were of the opinion that teaching-learning materials were not sufficient in their institution.

**Professional Competency, Induction, and Performance**

When teacher educators were asked in the survey to make self-assessment of their professional competency on three-point scale - whether it had “increased,” “remained static,” or had “decreased - 89% of elementary teacher educators felt that their professional competency had increased, whereas 11% thought it was static and not one perceived a decrease. In contrast, 96% of secondary teacher educators felt that their competency had increased, while 9% felt it being static and 1% experienced a decrease. The suggestions given by the respondents for enhancing their competency were as follows orientation programs or short-term courses be given in current developments and practices in education, information technology, research methodology, value education, human rights education, competency-based teaching and learning, universalization of elementary education, multi-grade teaching, innovative practices, and text book writing; more participation of in-service programs
especially in content and methods of teaching subjects, communication skills, action research, teaching aids, evaluation techniques, and educational planning and administration; and more opportunities for visiting institutions of excellence in India and abroad.

When views were sought from the respondents on whether or not there was any need of having a short duration course for teacher educators before being placed in the teacher education institutions, 86% elementary and 77% secondary teacher educators reported their perceived need of such a course, while giving the suggestion about the preferred duration of the course - from one to three months.

With regard to the utilization of knowledge, skills, and talents, which is essential to enhancing job performance, among the respondents who were elementary teacher educators, 20% were of the opinion that their knowledge, skills, and talents were not fully used and 33% of the secondary teacher educators felt the same. The reasons that many of them gave include the current usage of unscientific syllabus, the provision of examination-driven training, a lack of academic freedom and appreciation for good work, the presence of non-cooperation of colleagues or principals, the increase of administrative and non-academic work, and the lack of infrastructural facilities and resources.

In view of the dissatisfaction in the utilization of knowledge, skills, and talents, it is interesting to note that the teacher educators did strive to enhance their professionalism in the use of new teaching techniques in the classroom. In brief, when the respondents were asked about to what extent they were able to demonstrate and use new methods or techniques in the classroom, 42% elementary and 30% secondary teacher educators indicated that they had demonstrated and/or used new techniques to a “large extent,” while 52% elementary and 57% secondary teacher educators were able to use to “some extent” and 13% of secondary teacher educators to “very little extent.” Not one single teacher educator had indicated that a dislike of or inability to use new techniques. Furthermore, the respondents had suggested some ways in which they could enhance their use of new techniques: for example, frequent training by national/state organizations on demonstration and use of new techniques of teaching; sensitizing teacher educators in the need of using teaching strategies appropriate to unique classroom situations; and provision of
teaching-learning materials and funds for materials needed for trying out and using new techniques of teaching.

Regarding the prime factor that helps ensure better performance in their institution, the respondents had identified program of quality teaching: in brief, more than 70% of elementary and secondary teacher educators accorded the most importance to the program of quality teaching. The other factors include the undertaking of research projects (26% of elementary a teacher educators and 52% of secondary teacher educators) and the organizing of co-curricular activities (41% of elementary and 35%).

In addition, teacher educators also suggested the following institutional programs for improving their performance: organization of in-service programs in content and methodology; conferences/seminars on research and innovative practices; improvement of infrastructural facilities; and recruitment of staff as per requirements of the curriculum and prescribed norms.

**Continuous Professional Education**

While continuous professional education is essential to improving teacher educators’ performance, the survey shows that about one-third of elementary teacher educators did not attend any in-service programs. The number of females who did not attend any in-service program was higher than that of their male counterparts. In the case of secondary teacher educators, one-fourth had not attended any in-service program and, unlike elementary teacher educators, the proportion of males and females not attending any program was more or less the same. More than 90% elementary and secondary teacher educators included in the sample considered the in-service programs being very useful or useful. None of them would suggest in-service programs being “not useful.” Some of the reasons given by the respondents for their not attending in-service programs include lack of time, excessive workload, and inconvenient dates. These findings show that the teacher educators were very much interested in attending in-service programs but could not do so unless they could receive adequate support.

**Perceived Problems of Student Teachers**

To play the proper role as teacher educators, the respondents needed to have the adequately prepared student teachers to work with. Yet, about 33%
elementary teacher educators who responded to the survey were dissatisfied with their students' educational background. They gave the following suggestions: the minimum qualification for entry into elementary teacher education institutions should be a Bachelor's degree (i.e. a university degree); teaching aptitude should be considered as a criterion for admission; and short-term bridge courses should be arranged for student teachers lacking solid training in subject matters.

Among the respondents who were secondary teacher educators, 44% were dissatisfied with their students educational background and gave the following suggestions: only those graduating with a first division record (i.e., A or A+ grade) should be admitted to secondary teacher education programs; assessment of students' aptitude for teaching should be conducted before admission; and there should be no mismatch between the students' subject specialization at the graduation/Post graduation level and methods of teaching subjects chosen in pre-service education.

Quality Improvement

As mentioned earlier, the respondents had identified program of quality teaching a prime factor that helps ensure better performance in their institution. When asked about quality improvement, there was a very encouraging response from the respondents about ways to and means of improving the quality of teacher education. Some of the suggestions were thought-provoking: a laboratory school be attached to every teacher education institution; recurrent in-service education for updating content and methodology be provided; opportunities for teacher educators to express their talents and creativity be created; regular evaluation of the effectiveness of teacher education program be conducted; provision of audio-video libraries be made; undertaking innovations and research by teacher educators be encouraged; greater link between the institution and community be established; adequate classroom for each subject be arranged; generous funding for research projects be given; Internet facility at teacher education institutions be set up; accountability in all areas of teacher education be institutionalized; greater academic freedom be granted; organization of seminars on need-based areas be made; the availability of latest Indian and foreign books and journals be made; and the use of information and communication technology by both teacher educators and student teachers be encouraged.
CONCLUSION

It is imperative for reformers to be in possession of a full understanding of teacher educators, who play a pivotal role in the provision of competent school teachers, such that educational reforms so formulated are practical and effective. The study reported in the preceding sections was conducted to help address the need. The findings reported here, furnishing a sketch of the profile of Indian teacher educators, highlight the tremendous task to be undertaken in, for example, improving teacher education institutions, selecting student teachers, developing curriculum, and enhancing the performance of teacher educators. The findings together document that Indian teacher education and teacher educators are in need of support for further improvement.

Yet, the findings so presented are still insufficient. More researches have to be undertaken on, for example, teacher educators characteristics, their work situations and working environment, their weaknesses and strengths, their achievement levels and avenues for professional growth, the difficulties they face in their institution and with their student teachers, etc. These further researches are essential to enhancing a fuller and deeper understanding of Indian teacher educators, who invariably impact on teacher education. Research focusing on these and other related issues would provide valuable insight in teacher education.

NOTES

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Perspectives in Teacher Professionalism in India

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Abstract

Teacher professionalism in India in the post-independence period is characterized by sustained initiatives and efforts to empower teachers. The inherent legacy of an alien system is now gravitating towards decentralization, contextualization, and community process. This paper elaborates on the concept of professionalism within the Indian context by referring to and examining various expert opinions to shed light on the parameters of professionalism, some of which need priority strengthening in the Indian teacher education system. Policy initiatives taken to promote professionalization in Indian teacher education since the promulgation of National Education Policy in 1986 are reviewed in this paper. Discussed are problems relating to professionalization of school teachers including para-teachers and strategies taken as corrective measures, as well as the threat and opportunity for Indian teacher professionalism.

Five decades of educational endeavors in India, a developing country struggling to universalize elementary education, initiating large scale educational expansion, and keeping an eye on education quality, form a unique context for enhancing professionalization of teachers. When one reviews the past development, the current issues, and challenges in the near future, one would indeed note that the Indian development of teacher professionalism is unique in various ways and has implications for other developing countries.

THE TEACHER AND EDUCATIONAL CHANGE IN INDIA

The idealized image of the teacher and the role expectation evolved over the centuries in India have survived among the popular cultural levels, though
the place and nature of inter-linkages of education system with other social systems were altered by the alien rulers in the colonial era. About two centuries ago, the structure and content of Indian education and its accessibility were comparable to the free nations in Europe. It was not state controlled (Dharampal, 1980; Nurullah & Naik, 1964). The education system was legitimized by religion(s) and served the stratified system. Teacher (or Guru) was equated with mother and father and all the three were revered as gods. Teaching was respected and supported as a profession. Supporting education was considered as a pious act, akin to the worship of god. Communities and rulers supported schools managed by teachers and the community at the local level. The institutions of higher levels of education were autonomous and were maintained by charities by rich and ruling classes (Mookerji, 1947/1960). There was no separate training of teachers. Most of the students of higher education ended up as teachers while the best amongst them joined higher education and learnt to teach. Majority of the teachers in higher levels of education continued their studies and reflections. Teachers enjoyed high levels of professional autonomy (Dharampal, 1980; Mookerji).

Colonial rule over greater parts of the Indian subcontinent and subsequent direct rule under the distant imperial power, however, led to the establishment of a bureaucratized education system by the turn of nineteenth century. For the first time in the Indian society, an education system with centralized control over the curriculum and teacher supply was established, resulting in standardized procedures of “instruction” in the schools. The alien rulers were not committed to mass education. The products of education, by and large, were meant for subordinate positions in the government and municipal administration. Hence, access to education became selective, and the new education system became a major mechanism to select and certify young people as eligible for further education or for public service or both. It necessitated the introduction of public examination system based on common curriculum. The new system was characterized by selection function, using the criteria of mastery of European History and English language and literature through common external examination, and curricular practices suited to develop obedient and subservient individuals. Since most of the teachers recruited were Indians, the alien rulers did not trust them and thus the traditional professional autonomy of the teacher was taken away. Teacher became a salaried employee, governed by norms and rules established by civil administration akin to any other clerical or inspectorial cadre. In a nutshell,
education became state controlled and served the interests of the alien rulers. (Mukherji, 1964; Nurullah & Naik, 1964)

During the freedom struggle, Mahatma Gandhi's philosophy inspired an indigenous system of education. By education, he meant "an all round drawing' out of the best in the child and the man - body, mind and spirit." An important emphasis in Gandhi's model, as Clarke (2001) pointed out, in keeping with the Indian ethos was the moral expectations from teachers. In contrast to previous models, teachers were required to be honest and virtuous. An additional objective in the Gandhian scheme of teaching of a craft was its function as an equalizer within Indian society.

Academic fraternity in India traces the origin of teacher training as it exists today to the year 1793, when the Danish Missionaries started a few training schools, called Normal Schools in Serampore in West Bengal (Adaval, Agrawal, Asthana, & Saxena, 1984). But the growth and development of teacher education in India in the post-independence era effectively began in mid-1960s and the National Policy on Education (Government of India, 1968) recognized the importance of teacher training in improving school education. The Constitution was amended in 1976 to make school education the joint responsibility of both state and central governments. At the same time, expansion of secondary education created demand for teachers with university degrees. The rapid expansion of secondary education was followed by the expansion of teacher education with a time lag. A large proportion of teachers during the early decades did not possess professional qualifications. However, the percentage of untrained teachers, which was 41.2% in the year 1950-51, came down to 10.19% in the year 1990-91. Similarly, the percentage of untrained teachers in secondary schools, being 42.69% in the year 1950, has come down to 9.9% presently.

It is paradoxical that in the developed countries, such as the United States of America and United Kingdom, the educational reforms and state interventions from late 1980s onwards tended to erode the historically evolved teacher and institutional autonomy. The Times Educational Supplement (April 1997) in a survey of 1,000 teachers concluded:

"Morale of Britain's staff rooms has hit rock bottom. Teachers are feeling disillusioned, demoralized and angry at being forced to carry out unpopular..."
government’s policies while being constantly blamed for society’s ills. (quoted in Hargreaves and Fullan, 1998.)

Osborn, Broadfoot, Abbott, Croll, and Pollard (1992, p. 148) also came to the same conclusion based on the evidence, suggesting the following:

... most teachers have had to change their teaching approach, their classroom practice, and their perception of their professional role in ways they would not have chosen for themselves resulting in pressure of time, intensification of work load, and loss of satisfaction in the child centered aspects of the job. There is evidence of loss of autonomy and a certain amount of demoralization...

In India, educational reforms introduced through new policy and programs have emphasized decentralization, contextualization, and process orientation. Torres (2000) mirrors the ambiguous perception of the teachers’ functions in the context of the policies of educational change of Latin America, which is fairly applicable to the approach and mind-set of policy makers and managers of educational change in the Indian context as well. According to Torres (2000), traditional reforms were dominated by investing in things before investing in people, dualism in perceiving teachers - teachers were both valued at the rhetoric level and distrusted and neglected at the empirical level. All the ills of the society were blamed on teachers. The same teachers were expected to usher in changes for the better. They were perceived as both antagonists and protagonists of educational and social change. Teachers were not a party to envision reforms, but were expected to implement reforms. Teacher training episodes were ad-hoc and discontinuous, perceived as a requirement of reforms and not as continuous professional development of teachers:

... in other words, training viewed as an ad hoc means to an end; an activity which is actually carried out and even planned when the reform package is ready and even already underway; a corrective and rehabilitating, representing a perennial challenge to teachers’ knowledge, its validity and its legitimacy (Torres, 2000, p. 257)

CONCEPTUALIZING TEACHING AS A PROFESSION: THE STATE-OF-THE-ART

It has been well argued that the possession of specialized knowledge is the defining characteristic of a profession (see, e.g., Cullan, 1978; Shils, 1978) and
that the volume of such knowledge available to each profession contributes to recognized status distinctions among the profession (Houstoun, 1990). The competence to perform professional roles well and effectively, as Dhar (1996) pointed out, is one of the important aspects of professionalism. Professional acumen is perceived as something worthwhile and contributes to society's well being. The classical work of Liberman (1956) on teaching as profession in the context of United States also lists the characteristics of an occupation, if it has to be considered as a profession as follows: a unique, definite, and essential social service; an emphasis upon intellectual techniques in performing its service; a long period of specialized training; a broad range of autonomy for both individual practitioners and for the occupational group as a whole; accountability; service to be rendered form the basis and not the economic returns; a comprehensive self-governing organization of practitioners; and a code of ethics. This has been further examined operationally by Sockett (1990).

In pragmatic perception of the people, teaching at all levels invariably boils down to transmission of bounded textbook knowledge. Popular images of classroom transactions appear to be uniform irrespective of variation in context, be it elementary or secondary school, rural or urban, or mono-grade or multi-grade. Thus, the service provided by the teacher is generally considered mechanical and routine devoid of high order of intellectual inputs. Conceptual clarification on the status and characteristics of the occupation of teaching to be considered as a profession eludes unanimity. Remuneration, social status, autonomy, and service motive are considered essential ingredients. Distinctions have been made on how professionalization can take place leading to high quality of services rendered, which, in fact, is termed as professionalism (Sockett, 1990).

It would be difficult to say that potentially relevant knowledge base of teaching has not been properly codified and rendered useful in a format that would be easily accessible to the practitioners. Making an observation about the Indian scene, Rajput (1998) points out that the vigor in the teacher preparation programs has often been considered inadequate even by the public and parents. This lack of "ecological validity" (Hargreaves & Fullan, 1992), which has been for long recognized as weak, has been pointed time and again in the Indian official documents. The system still prepares teachers who do not necessarily become professionally competent and committed at the completion of initial teacher preparation programs (National Council of Teacher Education [NCTE], 1998). Shulman (1987) has identified seven types of
knowledge as relevant in teaching profession: namely, knowledge of educational ends, purposes, and values as well as their philosophical and historical grounds; content knowledge; general pedagogical knowledge; pedagogical content knowledge; curriculum knowledge; knowledge of learners and their characteristics; and knowledge of educational contexts. Particularly, the pedagogical content knowledge has emerged as an important aspect of teaching profession in recent years (Darling-Hammond, 1999).

A sufficient degree of autonomy, presence of a collegium, and self-governance are also missing (Levine, 1988). Levine (1988) argues that for teaching to become a self-governing profession, it must have a structured induction experience conducted under the supervision of outstanding practitioners who can and will attest to the competence of new inductees to practice. Noddings (1999) adds the caring dimension to the commonly discussed competence dimension. The domain of moral life and civility in the classroom is equally important as compared to the competence in subject matter and finds teacher education failing on both these counts (Noddings, 1999). To Langford (1978, p. 45) a profession is “a social phenomenon in that its members see themselves as members of a social group”. More importantly, in the case of a profession, “… it is not sufficient for its members to see themselves as a profession…” but “… must also be recognized as a profession by the rest of the community” (Langford, 1978, p. 45)

The classical image of a professional teacher was derived from the functional perspective of the sociology of profession in the 1960s. From such tradition, professional teachers are presumed to have the characteristics, such as teaching as a social function positively disposed to student welfare and satisfy professional standards (Choi, 2001).

Hargreaves (2001) has precisely analyzed the trends in understanding professionalism:

Outside education, professions have been represented theoretically in the image of those who belong to them and advance their interests, as having a strong technical culture with a specialized knowledge base and shared standards of practice, a service ethic where there is a commitment to client needs, a firm monopoly over service, long periods of training, and high degrees of autonomy (see, e.g., Etzioni, 1969). Larson (1977) identifies the criterion of autonomy as a crucial one that helps distinguish professional from proletarianized work.
Johnson (1972), however, takes many of these classical criteria of professionalism to represent ideologies of self-promotion rather than realities of practice where professionals' self-interest are often privileged over those of their clients. Friedson (1994) argues that common-sense discourses of professionalism and behaving like a professional have been captured by managerialism as a way to control white-collar workers. Meanwhile, Schön (1987) has recast professional action as comprising distinctive, reflective, and practical judgments, rather than esoteric knowledge. (p. 92)

Hence, only technical/rational, skill-driven task is not the essential characteristic of any profession. If so, the occupation of minister under the Christian institutions also becomes a non-profession. However, ministering has always been treated as profession all over the world. As such, instead of task related factors, it may be better to examine the vital nature of the service for the survival of individuals and societies, higher order of intellectual investment, reasonably long duration initial preparation, constant up-gradation of knowledge, status and remuneration commensurate with the importance of service, self regulation at individual and collective level of practice, etc, which can be considered to treat an occupation as profession.

THE INDIAN SCENE

While most of the characteristics above are shared by a very few professions, the occupation of teachers rarely exhibits any or all of the above in most of the countries all over the world. However, in India, the process of professionalization has been initiated to shape, at least, the more relevant characteristics of the profession, that is, preparatory education, arrangements for professional up-gradation of the practitioners, reasonable amount of autonomy, active participation of the professional organizations and guilds in setting standards, and remuneration in commensuration with the degree of importance of the service to the society.

In India before the advent of British ruling, teaching was considered as a profession. Again, the teacher was not a paid servant of the government, but a charge on the local population. According to Kumar (1996), low status ascribed to Indian teacher was the contribution of hidden agenda of the colonial state. Subordination of education to religion and social stratification apart, teachers with various nomenclature enjoyed high level of professional
autonomy. Either on the initiative taken by the community to meet its educational needs and/or on the part of individuals to render educational service, schools at elementary level used to be started in communities. Sometimes, rich families would invite a scholar to teach their wards. The community was providing livelihood support to the teachers. Centers of higher learning used to be the home of a learned person, who took charge of the young scholars and taught them not only the scholastic curriculum but also moral and ethical life styles.

The system transplanted from Britain and its subsequent modifications through state control and the neglect of professional aspects of teaching occupation undermined the further evolution of the teaching profession beyond what it was before the intrusion of the colonial rule. In spite of the span of over two centuries, the popular sentiments and the cultural image of teachers have persisted even today. The National Policy on Education (Government of India 1986/1992) accords professional status to the teaching profession. It is important to treat teaching as a profession so that social action can be initiated to change the present orientation of “training” a teacher. The central issues relating to professionalization of teaching revolve around recruitment of students for teacher preparation, improvement of the capacity and competence of teachers to provide better service through in-service learning, code of ethics, and maintenance of status of teachers commensurate with their service to the society.

The policy discourses have insisted on teachers with professional qualification from the very beginning. However, at the practice level, this is being met partially and the presence of teachers with specialized training is not uniform in all regions of the country (Walia, 2001). It is the chasm between teacher education and teacher practice that often makes much of teacher education dysfunctional. Most of the knowledge and recommended practices emphasized by the training draw heavily upon the knowledge base of the Western developed countries. The university departments for teacher education work towards interpreting the received knowledge and practices from the West (Altbach, 1977). Hence, teacher training tends to become theoretical and is often incompatible with the reality. Studies in mid-1980s have revealed that teacher educators and student teachers felt dissatisfied with the practice part of secondary teacher education courses and opined that the emphasis was more on theory (see, e.g., Bhatta, 1987; Deo, 1985; Natarajan, 1984). A recent study (Kumar, 1996) on the teacher education curriculum in four large southern
states of India revealed that the teacher education curriculum in the university departments have not changed much and that the structure and guidelines provided by the NCTE have not been incorporated.

The in-service education is being addressed through disconnected initiatives and measures rather than comprehensive approach towards all aspects of the teaching profession. A national study (National Council of Educational Research and Training [NCERT], 2000) of classroom processes in various parts of the country has indicated the persistence of such a mind-set among the government officers and teachers involved in the implementation of teacher training in recent years. The report (NCERT, 2000) describes a training session organized to familiarize teachers with an innovative approach in developing local specific curricular materials for individualized learning of basic competency and management of learning. The teachers were seen, during most part of the training, just cutting and pasting pictures and textual materials to prepare charts for use in their respective schools from the photocopies of the printed handbook of the previously designed charts. Thus, policy analysis needs to be taken keeping in view total education context.

Studies (see, e.g., Clarke, 2001; NCERT, 2000) have shown that generally the teachers themselves perceive their job as prescribed in the form of series of procedural routines-open the school, conduct the prayer, engage classes, complete the prescribed syllabus, and conduct periodic tests with a view to prepare the students for high stake examinations. Collectively, teachers and their organizations are being associated more effectively in matters of school organization, time allocation, curriculum, and on any other issue related to teaching and learning. Teacher associations tend to work more as trade unions than professional organizations, which would set standards and safeguard the status and support professional enhancement. This was not the case earlier.

POST-REFORM DEVELOPMENTS AND PROFESSIONALIZATION OF TEACHING

The profound political-economic changes of the 1980s, bringing an end to the cold war and disintegration of Soviet Union, resulting in ascendance of capitalism, had its shadow on various processes of education and teacher education. Both the developed and developing countries started to feel the pressure in the uni-polar world, with market-driven economies vying with each
other for space in a globalized post-modern world. Hargreaves and Lo (2000, p. 171) have pertinently pointed out the following:

Rather, in constantly changing, self-creating informational society, knowledge is flexible, fluid, ever-expanding, ever-shifting resource. It is not just support for work and production, but the key form of work and production itself. These new ways of generating, processing and circulating knowledge are absolutely central to what many experts now call the learning society or knowledge society. And the role of education and teaching in such society is absolutely vital.

The new professionalism of the teachers calls for committing to the path of lifelong learning by themselves and inspiring students in the same direction (United Nations Educational, Science and Cultural Organization [UNESCO], 1996).

In pursuance of the National Policy on Education (Government of India, 1986/1992), the flow of the resources of central government towards priority areas identified in the National Policy on Education introduced a new dynamism in the field of education. The unfinished task of universalizing elementary education assumed renewed urgency in the context of the structural reforms. The policy changes and purposeful interventions of the state at the primary level of schooling have highlighted the need for change at higher levels of schooling as well as in higher education. The policy gave high priority for the universalization of elementary education with revised objectives of universal access and enrollment, universal retention of children up to 14 years of age, and a substantial improvement in the quality of education to enable all children to achieve essential levels of learning. National standards for the first five years of schooling were defined under the label of Minimum Levels of Learning (MLL) (NCERT, 1993). The central government took initial steps to pilot the introduction of MLL through several projects at various places. As a result, MLL got integrated into the curriculum throughout the country. It needed massive reorientation of teachers, which was accomplished by the mid-1990s. Under a centrally sponsored scheme, called Programme of Mass Orientation of School Teachers (PMOST), nearly 1.8 million teachers were trained following a cascade model. The policy expects the standards to be defined for other levels of school education. A revised national curriculum framework for the entire gamut of school education has
been drafted to guide the states in revising the school curriculum as envisaged in the National Policy on Education (Government of India, 1986/1992).

The second reform with far reaching impact was the upgradation of teachers training institutions at the elementary and secondary levels. The new concept of District Institutes of Education and Training³ (DIETs) was evolved. One such institution was to function as a resource center for all aspects of teacher education at the district level. These institutions are now functioning in practically most of the districts in India and have been equipped and strengthened in the areas of pre-service education, planning and management, field studies, work experience, and educational technology. Similarly, for a cluster of districts, one college of teacher education was upgraded either as an Institute of Advanced Studies in Education (IASE) or upgraded as college of teacher education. While the colleges of teacher education focus on enhancing the quality of pre-service and in-service education at the secondary level, IASEs conduct research and strive to enhance innovations apart from conducting pre-service programs. All these play a leadership role in enhancing professionalism.

The third development of critical import is the Constitutional Amendment to enable the state (provincial) governments to enact laws to establish local governments responsible for development administration, including education called Panchayat Raj Institutions at administrative units of village, block, and district levels. These structural reforms have facilitated concrete and tangible achievement targets through decentralized planning and management.

The fourth development is the launching of decentralized planning and implementation of District Primary Education Program. Under this program, the center provided major portion of funds required for district specific plans prepared at the district level in addition to what is already being earmarked by the state for primary education under its own plans. The districts are identified by state governments based on the backwardness measured in terms of female illiteracy and with concentration of vulnerable population segments, like economically and socially weaker sections, identified in the Constitution of India. In-service education is one of the significant aspects of implementation.

In 2001, the Government of India has launched a national mission for ensuring free and compulsory education of satisfactory quality for all children up to 14 years of age with a time span of ten years starting from 2001. This approach
to education for all is known as Sarva Shiksha Abhiyan. Here again, teacher orientation forms the critical input.

Presently, Indian planners are anticipating the future consequences of unprecedented expansion of elementary education and the demand that would be generated for secondary and higher education in the coming decade. Simultaneously, the rapid changes in information and communication technology and the impact of globalization are affecting. The implications for teacher education are also emerging fast.

All the above structural reforms and programs affect the role of and expectations from teachers - both the current and future entrants. Such a development has been anticipated by the National Policy on Education, as it has focused specifically on the issues related with teachers' role and status and teacher education. The policy intentions, action plan, and specific country-wide programs have raised issues and concerns of teacher education and professionalization of teaching, which are at par with the concerns and problems faced in the developed countries. In the developing countries like India, which need to leapfrog to post-modern world without passing through the full path of industrialization and modernization, negotiating global and internal changes, is both a challenge and an opportunity.

INDUCTION TO TEACHING AND TEACHER EDUCATION

The pertinent questions to be asked in relation to teacher education in the Indian reform context are the following: Who should teach? How should teachers be taught? Where and when should teacher education take place? What should teachers be prepared to do? While answering these questions in the context of United States, Griffin (1999) recommends prior academic achievement, candidates' oral and written communication skills, interpersonal skills, willingness to confront and deal with social and cultural complexity, self-awareness and disposition towards reflection, cosmopolitanism, and well-developed social conscience as the personal criteria for identifying in recruiting candidates into teacher education. In a pluralistic society like India, all the qualities identified above are relevant. However, one has to keep in mind the magnitude of the task of the second largest populated country in the world. The enormity of the enterprise in terms of students and institutions with the size of the teacher population can well be understood when one sees the
school-going population of 6-18 age learners is around 284 million students at the beginning years of 21st century. Then, there are around 3.2 million elementary school teachers, who are working in 840 thousand schools, and around 1.7 million secondary and post-secondary teachers from 112,000 schools (Government of India, 2001). The problem is further compounded by the fact that within the country there are 18 officially recognized languages and hundreds of dialects. Hence, the issues of teacher education and professionalization of teaching occupation need to be discussed in the contexts of manageable units working at the local level, with support from provincial and national institutions. Further, the pressure is already on how to make the economic sector productive and competitive by integrating modern technologies, especially information- and bio-technology. At the same time, the focus on basic sciences and social sciences should not be allowed to blur in the glare of new developments.

In the context of the sheer magnitude of the teacher demand and supply factors operating in the country along with many lucrative occupations attracting intellectual talents, selecting high caliber persons with requisite personal qualities indicating aptitude for teaching becomes a self-defeating task. Hence, the strategy may have to shift to the process of teacher education where opportunities have to be created to develop effectively the required personal qualities among the given set of individuals, irrespective of their intellectual caliber. Thus, it is the process of teacher education that assumes greater importance in the Indian context. The issue of how teachers should be educated refers to models of teacher education followed in teacher education institutions and university departments.

Teacher education in India suffers from the mind-set of "training" rather than educating teachers to become professionals. Nomenclature of teacher education institutions has changed from the colonial "Teacher Training College" to "College of Teacher Education." However, the institutions preparing teachers for elementary education are most often referred to as teacher training institution even today. Teacher certification programs in India take off with an assumption that the student teachers possess mastery of subject content and, as such, the focus of teacher preparation is primarily on equipping them with theories in the domain of "pedagogy" with a limited scope for practicing the pedagogic skills. Teacher education neglects the learning of the content. The four Regional Institutes of Education, forming part

learning of the content. The four Regional
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of NCERT, offer integrated courses spanning four years at the graduation level combining content with pedagogy.\textsuperscript{4}

A review (Singh & Malhotra, 1991) of the trend of researches on curriculum of teacher education programs in different parts of India during the period 1983 to 1988 reveals that all studies came to the conclusion that the teacher education curricula prevailing in the Indian context at different levels did not meet the felt needs. A study of teacher education programs in different institutional setting indicate that "pedagogy" revolves around standardized approaches and methods labeled as Herbartian steps, micro-teaching, lesson planning, simulated teaching, and use of teaching aids (Srivastava, & Aggarwal, 1999) The causes of such a situation are obvious. Practically every developing country has inherited an alien system of education and teacher education. An indigenous system of teacher education is essential to respond to specific needs, regional variations and diversities. The existing models of teacher education have outlived their utility and capability to absorb the changes taking place. The emerging need is to build institutional capabilities and specific individual competencies in teacher education institutions.

The preparation of primary school teachers has not received due attention within the sector of teacher education in India due to its lower status - it does not come under the purview of universities. In addition, it suffers from the deficiencies in the form of its isolation from the schools, community, and other institutions of teacher education at higher levels (Sheshadri, 2002). With the exception of negligible cases, the teacher educators of elementary teacher education program belong to the cadre of graduate teachers with Bachelor of Education (B.Ed) qualification. Historically, B.Ed focuses exclusively on preparing teachers for secondary schools. Hence, the entire teaching perspective gets flawed right in the pre-service teacher education of elementary teachers. Preparing teacher educators exclusively for teacher education of elementary education is a long neglected policy issue.

School curriculum in India has been highly structured in the form of linear year-grades (each grade is called either as standard or class, i.e., like standard 1 or Class 1 in different parts of the country) and spiral structure is built across stages. Such a structure requires one teacher to teach one class to satisfy the required learning time. But most of the rural schools do not have one teacher per class, thus the problem or paucity of resources that is responsible for such a situation. It is the size of the community that decides the outer limits of
enrollment in the school. Neglect of rural contexts in teacher education programs has also been observed in United States of America, Canada, and Australia (see, e.g., Yarrow, Ballantyne, Hansford, Herschell, & Millwater, 1999). In the context of India, educators consider the presence of small schools having one teacher to teach more than one “class” in parallel as an anomaly instead of an opportunity to structure curriculum in a different way. The teacher training based on uniform and rigid curricular structure in the form of year-grades is of little help to the teacher in rural areas. In fact, the professional education provided to prospective teachers entering the profession in a period of rapid changes should focus on variations encountered in the practice contexts. It would be relevant to look at the proposal for clinical-teacher education model for preparing teachers for post-modern world. The clinical teacher teaching model (Griffin, 1999) is context sensitive and well connected with ground realities. The model has features that are interconnected and related and are knowledge based (rather than solely based on conventional wisdom).

INSTITUTIONAL ARRANGEMENT OF TEACHER EDUCATION

Where and when should teacher education take place? In the Indian context, teacher education curriculum for secondary school teachers has been in the hands of universities and the teacher education takes place in colleges, with most of them affiliated to universities and managed by the state governments or under grant-in-aid by the state governments. There are more than 150 autonomous state universities and some deemed to be universities having their own teacher education curricula. However, the differences across them are marginal and have not changed adequately over the years. The curricula for teacher education elementary school teachers are prepared by the State Council of Educational Research and Training and the education takes place mostly in government institutes. The policy and executive jurisdiction on all matters of education including teacher education till 1976 rested with state governments. Hence, the recommendations of National Education Commission (1964-66) and their follow up by NCTE, an advisory body in 1973, that brought out broad guidelines in the area of teacher education with respect to curriculum, course duration, and structure did not evoke much response.
NCTE became a statutory body with effect from 1995 with responsibility of laying down norms, standards, and guidelines for teacher education and institutions of teacher education to promote innovation and research and dissemination of knowledge and to advise the central government in matters related to teacher education. The statutes require that each and every teacher education institution obtains recognition of the NCTE. It brought out Curriculum Framework for Quality Teacher Education in 1998 (NCTE, 1998). Several new initiatives have been launched as consequence of the effort. One of these is the introduction of a two-year pre-service teacher training course for secondary teachers in Regional Institutes of Education of NCERT (Rajput & Walia, 1998).

PROFESSIONALISM AND PARA-TEACHERS

Apart from the initial training, the dimension of continued opportunity for professional development of the working teachers becomes higher priority to bring about educational reforms. However, in some cash-strapped states, there has been a tendency to resort to the appointment of para-teachers even in large rural habitations or to fill up vacant positions as the government cannot afford to pay the full salary of a regular qualified teacher. Findings of the case studies of the para-teacher phenomenon in different parts of the country come out with a somewhat mixed picture. The basic issue emerges from two sources. First, the emergence of para-teachers as a solution for the difficulties experienced by the state agencies in finding financial resources for elementary education and not as a solution to the problem experienced by the communities, which is expected to be in control of primary education. The second is the program specific in-service teacher education in the form of skill-specific training. To some, this appears to be a contradiction between policy and practice with respect to necessary conditions for quality education when semi-qualified and untrained para-teachers are given the responsibility of educating children in interior areas. However, as a one-time measure to extend the outreach of universal elementary education to certain areas with specific needs, this appears to be the only alternative and hence is justifiable. In the context of the professionalization of teaching, the term para-teaching appears a bit odd. But then, one of the hallmarks of professionalism is the motive of service and therefore the future potential of local teachers cannot be under-estimated. It requires several conditions: for example, the communities are empowered to take control of their own elementary schools and strengthening of cluster
resource center manned by effective teacher educators to provide continuous on-site professional support.

Continued professional development, commonly known as in-service teacher education, plays a vital role in enhancing teacher quality as pre-service education can only provide the basic foundation for teachers to strive to become professional. Among the seven types of knowledge required in the making of a professional teacher as enumerated by Shulman (1987), only the educational purposes, content, and general pedagogy can be acquired in the initial training. Pedagogical content knowledge can come from the in-service training during the initial years. The Indian society, being diverse and vast, pre-service training alone cannot anticipate the range of contexts a prospective teacher may face in her or his professional life. The gaps among the parts of the society in their ability to cope with the rapid changes and help the society become a learning society makes continuous professional development of the teacher imperative. Based on the studies of schools across United States, Newman, King, and Youngs (2000, p. 259) conclude:

Professional development for teachers is often recommended as a strategy for school improvement. But professional development has generally failed to improve teaching, because it is usually implemented in ways that violate key conditions for teacher learning. Researches tend to agree that to promote the kind of teacher learning, professional development should concentrate on instruction and student outcomes in teacher specific schools; provide opportunities for collegial enquiry, help and feedback; and connect teachers to external expertise while also respecting teachers’ discretion and creativity. Finally these experiences should be sustained and continuous, rather than short term and episodic.

Among recent efforts to improve the teaching-learning process in the primary schools in India, a large proportion of time and considerable resources are being spent on in-service education programs all over the country. But most often they are in the form of training offered to teachers working in a wide variety of contexts and are based on common training packages on different aspects of teaching. Different teachers are given different packages keeping in mind the numbers to be covered under the general head of in-service teacher training and utilize the allocated money without reference to the utility and impact. Among such activity-dense implementation of foreign funded educational programs, a structure of training institutions has evolved
promising great potential in the long run in the form of Block Resource Centres and Cluster Resource Centres.

LOOKING FORWARD

Professionalism refers to the internalized code of ethics and commitment among the practicing teachers at collective level. This aspect of the profession also depends upon the organization of practitioners in the form of association. Such professional associations strive to ensure status and emoluments for teachers while assuring the society at large the integrity and commitment of its members. In the Indian context, the associations of teachers are taking a broader view of their functions and responsibility. This paper has reviewed both the development and issues of teacher professionalization within the educational development context of India. Given the unique features and characteristics of Indian school education and teacher education, enhancement of teacher professionalization can hardly be easy. In recent years, several professional associations are emerging strongly as a party to the formulation of educational policies and programs. This, in tune with government functionaries, non-government organizations, and national level institutions, can play a very encouraging role in the years to come.

The prospect for having increased degree of professionalization of teaching in India is challenging. As it has happened elsewhere in the world, structural reforms and globalization have threatened the existing arrangement of education and professional practices of teachers and, at the same time, have provided an opportunity for new professionalization. The present compulsion of reforms has created opportunities for India to dismantle the colonial legacies and leapfrog to the state of post-industrial society. Several enabling developments are in the process of taking roots, of which include decentralized educational management, improved connectivity across the country (and also across the globe) through revolutionary changes in information technology and increasing availability of a large pool of human capital in information technology. New structures and approaches are being tried out or tested under highly visible educational programs. It is for the national level professional organizations to change themselves into learning organizations and also inspire and support the field level organizations to equally become learning organizations to, in turn, promote the building of a knowledge-based learning society.
NOTES

1 Prof. Jagmohan Singh Rajput is the Director of National Council of Educational Research and Training, the apex national organisation in school education. He has held several important positions at national level, including Joint Educational Advisor to Government of India (1989-94) and Chairman, National Council for Teacher Education, India. He has published several significant books and a larger number of research articles.

2 The genesis of this statement lies in a Sanskrit verse (an Indian language) verse: “Gurur Brahma gurur Vishnu gururdeva Maheshwarah, Gururdeva parambrahma tasney Shri gurve namah.” Here, the teacher is meant essentially a spiritual one who is receiving salutation from the Indian trinity – Brahma, Vishnu and Shiva, as he is verily the Supreme Brahman and the embodiment of the Bliss.

3 District Institutes of Education (DIETs) were one of the component of a scheme for the restructuring and revitalization of teacher education which arose from the National Policy on Education (Government of India, 1986/1992). As part of the larger movement towards decentralization of educational management, DIETs were charged with improving training of teachers at the elementary level.

4 Interestingly, these four-year programs of teacher education were started in the early 1960s and have remained essentially limited to these institutions, with an exception of four years teacher education course, started in the late nineties by the Delhi University in the area of elementary education.

5 State Councils of Educational Research and Training are state level agencies preparing the role of conducting research, development and training in the fields of school and teacher education. By way of their functioning, on the one hand they maintain a close contact with a national body like National Council of Educational Research and Training and, on the other hand, maintain contact with state departments.

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Symposium

Reform and Restructuring in Indian In-service Teacher Education

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Abstract

In-service teacher education and training (INSET) plays a prominent role in Indian teacher development and teacher growth. Since India's gaining independence, INSET has gradually received due attention from policy-maker and educators and moved up to its present day central position. It has also further gained momentum due to policy initiatives introduced since 1986 and due to the systemic changes that have emerged with the establishment of district institutes of education and training and of the National Council for Teacher Education. Examined in this paper are the various models operating in the country and the specific requirements of locale, content, transactional strategies, and target groups. Also elaborated are prominent examples of INSET as well as the challenges and issues to be coped with in Indian INSET.

Teachers shape and are shaped by education. By instruction and personal example, teachers impart knowledge to learners, awaken curiosity, stimulate interest, and intellectual hunger, and enhance their self-growth and self-esteem. Teaching remains dynamic, lively, and absorbing as long as the teacher is committed to lifelong continuous learning, and remains reflective by nature. Those who teach should never cease to learn is an assertion based on the assumption that teaching takes new color when a teacher engages himself in lifelong learning. Teacher development is thus a continuous on-going process.

Teacher education is a comprehensive and composite activity which, according to Prof. R. H. Dave (National Council for Teacher Education [NCTE], 1998, p. VI-VIII), compasses components such as pre-service and initial teacher education, recurrent in-service teacher education, continuing self-learning, professional orientation of school principals and other educators, and
enrichment opportunities for teacher educators. These elements of teacher development above are like strands, which by themselves have little meaning unless supported by other strands. Talking about community life, Quinn (1995) says that community life is like a web where each strand of the web helps other strands, nothing is special, nothing is irrelevant. The same argument is relevant for different subsystems of teacher development.

World Declaration on Education for All (WCEFA) (1990), as well as Delhi Declaration (1993), has stressed the need of teacher development as it has direct implication for Education for all (EFA). The World Bank (1995) has also stressed teacher education through distance mode as it does not dislodge teachers from their place of work. Components like pre-service program, induction program, in-service courses, and teachers self-learning may be organically integrated to rejuvenate teacher development, resulting in the enhancement of informed teachers with improved pedagogy and contributing to the shaping of reflective teachers (Schon, 1987). Teacher professional development is the sum total of pre-service, in-service, induction programs, and self-learning that help in developing better and informed teachers who provide better classroom teaching.

**IN-SERVICE TEACHER EDUCATION AND TRAINING**

In-service teacher education and training (INSET) plays a crucial role in teacher development. It is no cliche but a reality that those who teach should never cease to learn. The National Policy on Education (1986, p-26) stipulated that “teacher education is a continuous process and its pre-service and in-service components are inseparable.” United Nations Educational, Scientific and Culture Organization (UNESCO) also stresses the importance of in-service education and observes that “in-service training is on the whole as effective as pre-service training, if not more so in its effect on quality,” (1996, p 147). Professional development of a teacher begins with pre-service education and gets renewed through in-service programs. It does not mean that there is a simple linearity between the two. There are elements of “change” and “continuity” in teacher education system of which necessitate renewal and upgradation of skills and competencies (Rajput, 1996).
acquaint them with emerging trends and new policy issues. In-service courses are also offered to prepare teachers for new roles. Strategy varies (Shardendu, 2001). It can be on site or off site, effected through attachment, study visits, or exchange programs. And it can be offered through long- or short-term orientation or enrichment programs.

PROGRESSIVE MILESTONES

The need for in-service education in India began soon after 1947 when educational films were made available to schools for viewing. An Audio Visual unit was established in the Ministry of Education so that teaching aids could be developed for improving classroom instruction. However, the first structural intervention at the school level was made in 1950s, between 1955–58 by establishing 74 Extension Service Centres and 23 Extension Units attached to graduate teacher training colleges. Historically, it was the first step taken up to promote in-service teacher education. With Extension Service Centres set up, INSET got institutionalized.

The second step, massive and momentous, was taken in 1961 by establishing the National Council of Educational Research and Training (NCERT) and its four regional colleges of education (now known as Regional Institutes of Education) to launch in-service and pre-service programs. The National Institute of Education (NIE) of NCERT was the premier institute to launch training and research programs in the in-service sector. NCERT organizes in-service training of teachers in various fields like research methodology, educational technology, action research, science teaching, language teaching, micro teaching, learner-centered pedagogies, and many others (NCERT Annual Report, 2001). It also organizes teacher training programs in vocational education under the aegis of Central Institute of Vocational Education, Bhopal. The five regional institutes of education, located in Ajmer, Bhopal, Bhubaneshwar, Mysore, and Shillong, regularly organize in-service programs for key resource persons in their respective regions.

The next milestone relates to the setting up in the 1990s of state institutes in educational research and training in states. In the first phase, State Institute of Education (SIE) and State Institute of Science Education and Research (SISER) were set up during 1965-70. Later on, these institutions were upgraded to Council of Educational Research and Training (SCERT) or State
Institute of Educational Research and Training (SIERT). Now, they are the apex training and research institutions at the state level.

The fourth milestone in Indian INSET was realized in 1973 when the National Council for Teacher Education (NCTE) was set up as a non-statutory body with headquarters in NCERT. This body, being non-statutory, did not have legal powers to coordinate and streamline teacher education programs in the country. However, it developed curriculum and support materials for teacher education. It brought out the National Curriculum Framework on Teacher Education in 1978 and 1988 and organized many in-service teacher education programs for key functionaries.

Under a tripartite agreement between the Government of India, United Nations Educational, Science and Cultural Organization (UNESCO) and UNDP Centre for Educational Technology (CET) was established in 1973. It used mass media to support and enrich primary education as well as in-service teacher education programs. CET under the well known Satellite Instructional TV Experiment (SITE) Project trained during 1975 nearly 45,000 primary school teachers in six states using films, TV, audio programs, and other teacher support mechanisms. Due to these success stories, CET in 1983 was upgraded to the Central Institute of Educational Technology (CIET) and State E. T Cells upgraded to State Institutes of Educational Technology (SIET) to offer media-based elementary education programs and to develop in-service programs for elementary teachers, telecasting them through Satellite TV. With these initiatives, India began the systematic use of mass media and educational technology in in-service teacher education at the national and state levels.

In 1975, in-service teacher education programs were launched for the first time using satellite television. India acquired ATS-6 and launched education programs for adult education, primary education and also for teacher education. Primary school teachers were trained in the teaching of science and languages, as well as in methods, such as participative teaching, and in the use of local resources and low-cost teaching aids.

The sixth milestone was reached when the Government of India established Indira Gandhi National Open University (IGNOU) to launch various programs, including in-service teacher education programs through open distance mode. IGNOU has launched in-service training programs for teachers at higher education level through open distance education mode. It has undertaken
through distance mode staff development programs of teachers, especially in the states located in the Northeastern region. With the establishment of open distance system, teacher education programs are now being organized by IGNOU and such state open universities as Kota Open University, Bhopal Open University, and Open University Nasik. These programs follow the norms as issued by NCTE.

Another important milestone in teacher education was realized in 1986 when the Indian Parliament passed the National Policy on Education under which teacher education was considered a significant component. Then, the Programme of Action (1992) stipulated that there will be a Central Scheme to restructure and reorganize teacher education program with following components: the establishment of District Institutes of Education and Training (DIET) in each district; the upgradation of selected secondary teacher education institutions into Colleges of Teacher Education (CTE) and Institutions of Advanced Study in Education (IASEs); the strengthening of SCERTs; the establishment and strengthening of universities’ departments of education through the University Grants Commission; and the mass orientation of teachers.

Under the centrally sponsored scheme, all the above targets have been achieved. There are now nearly 450 DIETs and nearly 100 CTEs and IASE. The strengthening of SCERTs and universities’ departments is still going on in a phased manner. The mass orientation of teachers has been a unique feature, and presently it is going on in a decentralized fashion in all the states under overall guidance from NCERT.

The setting up the National Council for Teacher Education (NCTE) as a statutory body was the next milestone of great significance. In 1993, the Government of India, by an Act of Parliament, established NCTE as a statutory body with a mandate to undertake planned and coordinated development of teacher education at all levels and in all domains, including in-service training.

Gyana Darshan, a dedicated channel of educational television, was inaugurated on 26 January 2000, broadcasting programs on higher education, adult education, secondary education, and teacher education. Gyan Vani, an audio channel, was launched in 2001 of which is also being used in teacher education. These efforts show the significance which policy planners have
attached to teacher development and particularly in-service teacher education. Table 1 presents these important milestones in a tabular form.

Importance of INSET has been brought out by various researches conducted in India and abroad. It has been observed that Huberman, Thompson, & Weil (1997) teacher commitment, energy, knowledge, and skills may be the central determinants of school effectiveness. Kaur (1988) found that in-service education and training contributes significantly to development of professional competencies of teachers. Misra (1992) also concluded that in-service training has positive impact on teachers’ behavior and their attitudes towards teaching. Verma (1997) studied learning styles of in-service teachers and found that Science and Mathematics teachers used more deep learning strategies than social studies teachers. The critical role of INSET has stimulated many changes at various points relating to target group, locale, content and transactional strategies. Most important has been the systemic intervention to set up structures and systems to promote INSET.

SYSTEMIC INTERVENTION

Table 1 records the various steps being undertaken in India over the last 50 years to strengthen in-service teacher education. Then, some important curricular changes and systemic interventions have brought about significant and substantive changes which need to be highlighted. One was the establishment of DIETs in every district to provide both in-service and pre-service teacher education (for details, see, e.g., Yadav, 2002). Such an establishment is a significant development, leading to the setting up of a quality resource institution at the district level (county level). Nearly 450 such institutions have already been established. The second significant systemic intervention has been the establishment of NCTE as a statutory body. It regulates the setting up of new institutions in teacher education and also monitors their programs and infrastructure facility. It has been a significant development in teacher education for its quality assurance functions. The third important development has been the use of mass media to promote teacher education - as recorded in Table 1, both the Gyan Darshan and Gyan Vani are dedicated channels, broadcasting around the clock and having a significant chunk of programs dedicated to teacher education. Slowly but surely, distance education mode is becoming an integral part of Indian teacher education. Other changes have also come about with respect to spreading of and the widening of
### Table 1

**Milestones in In-service Teacher Education**

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
<th>INSET Activities</th>
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| 1940s-1950s | • Film Library Audio Visual unit, Bureau of Extension and Field Services being set up in the Ministry of Education  
              • The Establishment of Extension Services                              | • Providing inputs to schools and teacher training colleges                       |
| 1961        | • The setting up NCERT and four regional colleges, now known as the Regional Institutes of Education | • Organizing in-service programs for key resource persons                          |
| 1965-75     | • The establishment of state level institutions:  
              State Institute of Education (SIE) and State Institute of Science Education (SISE)  
              • Later on, these merged into SCERT                                      | • Organizing state level INSET programs for teachers, headmaster,  
                                                                                                                                                                           
              curriculum designers, and educational administrators                   |
| 1973        | • The establishment of NCTE (with headquarters in NCERT, CET, and State Educational Technology Cells) | • NCTE was established with one of the functions being the giving of support to in-service teacher education,  
                                                                                                                                                                           
              including the designing of teacher education and curriculum and the organizing of training programs.  
              • The organization of In-service programs and establishment of the National Curriculum Frame on Teacher Education in 1978-1988 |
| 1975        | • The use of satellite TV                                               | • With the help of ATS-6, India launched the first Satellite program and trained 45,000 teachers. |
| 1983        | • The establishment of CIET and SIET                                   | • Regular ETV programs in INSET                                                  |
| 1985        | • The setting up of Indira Gandhi National Open University              | • Using distance mode to develop professional competence of teachers through in-service programs |
| 1986 Reviewed in 1992 | • The formulation of the National Policy on Education and articulation of the Programme of Action | • Recommended centrally sponsored scheme of restructuring and reorganizing teacher education  
                                                                                                                                                                           
              • Recommended mass orientation of teachers  
              • Led to the setting up of bimodal institutions - IASE, CTE, DIET      |
| 1990-2000   | • The formulation of the District Primary Education Programme (DPEP)    | • Externally funded centrally sponsored scheme, which is at present going on in 271 districts in 18 states |
| 1993        | • The setting up of NCTE as the statutory body to set standards and norms for teacher education | • Established four Regional Offices and organized INSET programs.                |
| 2000        | • Gyana Darshan (Video Channel)                                       | • Dedicated channel which is being used for teacher education program.           |
| 2001        | • Gyana Vani (Audio Channel)                                           | • Dedicated channel which is being used for teacher education program.           |
the scope of INSET, in terms of target group local, content, and transactional strategies

Target Group

The main target group of in-service programs in India has always largely been teachers. Gradually, it is widening to include other functionaries as well. Programs for teacher educators and key resource persons are now organized by NCERT, National Institute of Educational Planning and Administration (NIEPA), National Institute of Open Schooling (NIOS) IGNOU, Central Board of School Education (CBSE), and other national organizations. Programs are also being organized for headmasters, principals, and other supervisory staff to include categories of personnel from local bodies. Further, in-service teacher education programs now cater to teachers working in formal schools, non-formal centers, open and distance teaching institutions, institutions of physical education, adult education, or special education, etc.

Locale

Locale of INSET has been largely off-site - that is, in the training institutions. Institution based trainings have their own strengths in terms of availability of resources. One key limitation is that they dislodge participants from their work environment. Now, there is a trend towards establishing school-based INSET programs. Many institutions want that training programs be organized at the school level so that participants do not get dislodged from their work environment. On-site programs take training to the doorsteps of schools/institutions.

Content

The contents of the in-service programs differ from program to program. Nevertheless, national orientation programs do contain some common themes, such as the role of teachers in promoting girls' education, skills and pedagogy relating to multi-grade teaching, essential levels of learning at the primary level, emerging roles of primary school teachers, and comprehensive and continuous evaluation. Other themes on which programs are organized relate to the teaching of language, mathematics, science and social sciences, health education, and work experiences. Recent trends show more inclusion of value education programs.
Srivastava (1996) studied in depth INSET programs of two states Maharashtra and Madhya Pradesh (M.P.) organized by their respective SCERTs. He found that SCERT programs of Bhopal (M.P.) emphasized child-centered and learning-centered teaching, such as story-telling, poetry, songs, group games, toy making, and manipulation of objects and pictures. Training programs in Maharashtra, in contrast, focused more on competency-based teaching, materials development, puppetry, and action research. Then, Arora and Singh (1997) surveyed in-service training of primary school teachers. They reported that states organize programs for primary teachers, head teachers, heads of cluster resource centers, block resource centers, and members of Village Education Committees. Training needs were identified on the basis of baseline learning achievement studies conducted by NCERT and NIEPA. It was also revealed that content of training varied from state to state. Most of the states monitored and evaluated quality of training by tapping trainees’ perception through surveying and interviewing. The studies also revealed that almost all states had not paid attention to follow up aspects of the training.

TRANSACTIONAL STRATEGIES

Strategies adopted in INSET vary, program- and theme-wise. One has to judiciously select an appropriate training strategy keeping in view the theme, program duration, background of participants, and the availability of resource persons, support material, and technologies to be used. Training strategies range from lecture cum discussion to project work, library work, group interaction, and field visits (Dewal, 1998). In-service education and training program also uses transactional strategies, like case study method, brainstorming sessions, panel discussions, seminars, symposia, and small group techniques.

Trainers need to keep in mind the prime fact that in-service participants are different from pre-service students. The former comes with field experiences whereas the latter does not have field experience. The pre-service students are the captive audience, whereas in-service participants are on the job, independent, self-directed, and autonomous learners. Training strategies should take in account the previous knowledge of trainees. The organizers and the resource persons can make an in-service teacher education program more effective and interesting if the age, participants are appropriately used at the planning phase. Since in-service
participants bring a lot of experience and new way of looking at educational events, they can significantly contribute to the design and development of the programs.

Three Transactional Models

As existed in India are three transactional models - face-to-face model, cascade model, and media-based open distance model - it will be instructive to briefly comment on each and also to offer some illustrative examples. Regarding the face-to-face model, it offers in-service training programs at its premises using direct face-to-face training approach. It is most effective when the number of participants is around 30 to 40. Besides lecture-cum-discussion mode, many other transactional strategies are also used, of which include project method, case method, library work, peer learning sessions, buzz sessions, and other small group techniques. The merit of this approach is that there is a direct and sustained interaction between the participants and the resource persons. The limitation of this approach is that it cannot be used when the institution wants to train a very large number of participants within a short time. Most of the training institutions largely use this model. There is a general feeling that this approach needs to be increasingly supplemented by media-based model.

Regarding the cascade model, the number of persons to be trained under the prescription of this model is very large, and the training design is built on two or three tier systems. In the first lap, trained are the key resource persons, who then train resource persons, who in turn train teachers. The advantage of this model is that a large number of teachers can be trained within a short duration of time. However, it has its limitations. Knowledge and information passed on at the first tier of key resource persons and then at the second tier of resource persons get filtered; resulting in transmission loss of training effectiveness. This model was adopted when PMOST program was launched. It was designed to reach millions of teachers during 1989 to create awareness about National Policy on Education.

Regarding the media-based open distance model, with the advent of satellite technology and computers, many training programs are imparted using electronic media. Audio-conferencing and teleconferencing are being used. In these, the electronic media play the key role and the print material a supportive role. The advantage of this model is that the training objectives can be achieved within a limited time period. The constraint of this approach is the
limited availability of the technology itself and its high initial investment. Online in-service courses are yet to come on the Indian scene. Some modest beginnings have been made by IGNOU and Nasik Open University, but a lot is yet to be done.

The above three models in India are now not seen as an either-or proposition. Depending upon the characteristics of the program, appropriate models may be used. It needs to be mentioned here that the cascade mode which was used previously has now been greatly modified. It includes a significant chunk of media-based programs. This stand was taken to overcome the transmission loss, which is obvious in the cascade mode. Institutions like NCERT and NIEPA use a mix of the three modes discussed above. Some illustrative examples are given below.

Illustrative Examples of Transactional Models

Program of Mass Orientation of School Teachers (PMOST). PMOST was launched as a centrally sponsored scheme, of which was among one of the most bold and massive in-service programs of teachers to acquaint them with policy initiatives. It was the first program in the history of India when thousands of teachers all over the country were expose to new thrust areas in Indian education. Following the cascade approach, the project used a three-tier approach: the first is to train key persons; the second to train resource persons; and the third teachers. The thrust of PMOST was to acquaint teachers with the various aspects of the National Education Policy promulgated by government of India in 1986. The first-tier program was done to orient key personnel required to be used in different states as key resource personnel. The faculty of NCERT and NIEPA were mainly responsible for the training of trainers. The second level program for training resource person was implemented in each state with the assistance of four regional colleges of education (now known as the regional institutes of education of NCERT to orient teachers through in-service teacher education programs on various aspects of policy initiatives. The Project was designed to reach 0.5 million teachers each year during 1986-89 to create awareness and develop competencies in school teachers. The program was executed during 1986-89 involving 1.8 million teachers. In 1990, it was extended to cover primary teachers to train them in the use of materials supplied under the Operation Blackboard Scheme.
PMOST was the first program that covered all the states and union territories in India. There were about 10,000 teacher-orientation camps organized, each with a ten-day duration. There was media support in the form of audio-video cassettes. There was a provision of integration of TV broadcasting provided by the Central Institute of Educational Technology. Many of the camps were residential and were bubbling with activities from dawn to dusk.

The satellite-based television programs, which were telecasted by arrangements with the Ministry of Information and Broadcasting, were made available in the third-tier programs of training. Some of the important themes of the PMOST were the use of audio-video aids, educational technology, salient features of National Policy on Education, core-curriculum, child-centered teaching, evaluation etc. Short duration orientation camps, talks and demonstration lessons were arranged on general topics as well as on teaching of science, mathematics and language.

While the major thrust of PMOST was on the training of primary teachers, it did not exclude the training of secondary teachers, with which the teachers were also being briefed on significant issues of National Policy on Education as well as on new developments in pedagogy and evaluation. One of the achievements of PMOST was the development of in-service teacher education package. Employing the activity approach, the package is self-instructional in format. It contains 29 modules for primary teachers and 30 for the secondary school teachers.

*Special Orientation Program for Primary Teachers (SOPT) (1993-Present).* SOPT program was designed after the PMOST program and was launched first in 1993-94. Like PMOST, it was also a centrally sponsored scheme launched by NCERT. This program continues and is likely to orient millions of teachers. The focus of SOPT is on new initiatives which were launched after promulgation of NPE (Gupta, 1997). Briefly, SOPT covers the Operation Blackboard Scheme with an emphasis on how to use the materials obtained under this Scheme, on how to ensure minimum levels of learning, and on how to evaluate both the materials and learning. Under SOPT, such themes as interactive teaching and child-centered approach are discussed. Multi-grade teaching, value education, education of special groups, and creating favorable classroom climate are some of the other features of SOPT.
Aggarwal and Kamlesh Rao (1997) undertook a study to look into the quality of in-service teacher training program for primary schools. They found that in the SOPT and DPEP programs, the stipulated amount of content could not be transacted. Further, loss of transmission was also observed more in SOPT than in DPEP programs. DPEP programs adopted learner-centered activities. There was more content coverage and less loss of information.

In examining the impact of in-service training on teacher empowerment, Lakshmi (1997) has found that the resource persons and trained teachers did not differ in professional skills, particularly in questioning, story-telling, making modals, and organizing group work; however, there was a difference in the generating of ideas, while the trained and untrained teachers also differed on techniques of questioning and story-telling. Then, Elahi (1996) had undertaken a critical study of in-service teacher education programs of SCERT in Delhi, and found that general awareness programs were not satisfactory. Resource persons were dominating in the training programs, and that materials distributed were irrelevant, while 64% of the vice-principals involved in the study had reported that they would use the new ideas in their schools.

*Interactive Video Project of CIET, NCERT.* CIET is entrusted with the task of using educational technology in promoting elementary education and training of primary school teachers. As mentioned earlier, CIET produced television programs both for PMOST and SOPT projects. These programs were telecasted along with face-to-face teaching sessions. On the basis of experiences and insight gained, CIET launched interactive video project related to SOPT. This project was launched in Karnataka in 1995 and was also evaluated. On receiving favorable comments, CIET launched another project in Madhaya Pradesh in 1996.

In the projects, CIET used the “uplink” facilities of IGNOU and also used IGNOU as the “teaching” center. CIET has equipped some selected DIETs which have telephone and fax facilities as “talk back locations” of the “receiving end.” There is a satellite communication terminal located in the classroom which can transmit the processed audio-signals via satellite to the teaching end. Due to system capacity, talk-back locations remain limited. Facilities for reception satellite communication signals are provided at the “teaching end.” There is a small studio set up at the teaching end to originate “live” or recorded lectures and to accommodate a panel of experts which is to participate in the talkback sessions. The studio is linked to the uplink earth
station in a forward direction for transmission and in the reverse direction for routing calls received from SATCOM talk back locations. With these successful experimental projects, CIET now proposes to set up its own uplink station. With this facility, CIET will open a new chapter in INSET.

OTHER INSET PROGRAMS AND PARA-TEACHERS

There are many non-governmental organizations (NGOs) doing excellent work in the provision of in-service teacher education programs. A few important programs deserve attention here. Shiksha Karmi Programmes, which started in Rajasthan in 1987, have yielded good results. The Shiksha Karmis are not regular teachers and do not have qualifications that formal teachers must be in possession. However, they are dedicated people and, whatever they lack in educational credentials and professional education, Shiksha Karmis make it for by their impressive commitment. These teachers are trained on the job using face to face approaches.

The Shikshak Samakhya (teacher empowerment) Programme originated in Madhya Pradesh is successfully continuing since 1992. District Primary Education Project (DPEP) teacher empowerment programs (Harding, 1996) and Joyful learning experiment (Bhatnagar, 1996) are other successful projects which are making a great impact on the quality of teacher competence. Training is also done by NGOs using community resources under DPEP programs, at Block and Cluster Level Resource Centres.

Regarding para-teacher, the word is being used with wider connotation in India. It refers to those teachers who do not possess the required formal qualifications but are appointed due to the urgent need for teachers in the respective geographical region. Thus, para-teachers include teachers who are working in alternative schools or non-formal centers or in specific projects like Lok Jumbish, Mahila Samakhya Programme or in the DPEP Programme. The term para-teacher also refers to the teachers working in Educational Guarantee Scheme (EGS) and in Alternative and Innovative Education (AIE) currently launched by the Government of India. These teachers did not have any initial teacher education exposure. They need to be provided with in-service education which may emphasize, in addition to contents and general principles of pedagogy, such topics as planning activities in and outside the classroom,
mobilizing and utilizing community resources, developing positive attitude towards profession and children, etc.

Educational Guarantee Scheme and Alternative and Innovative education scheme of the Government of India (operated by the Ministry of Human Resource Development) has now replaced the non-formal education system, which started in 1979-80 in ten educationally backward states - Andhra Pradesh, Assam, Bihar, Himachal Pradesh, Jammu and Kashmir, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh, and West Bengal. Non-formal education (NFE) got further impetus from the National Policy on Education 1986 when NFE became the important component of overall strategy of utilization of elementary education. While the focus was on ten educationally backward states, it also included urban slums, hilly areas, and tribal and desert areas. Most of the NFE programs were run by the NGOs. However, the Planning Commission has observed that NFE has been unsuccessful because local community could not be involved. It thus now stands dropped. The Government of India has given in 2001 a new scheme of EGS and AIE, which would ensure that each district target enrollment of all children in the 6-8 age group in formal schools and children from 9-11 in EGS. All efforts should be towards streaming them in formal system. Under the EGS and AIE, schools will be set up where no educational facilities are available. Teachers for these schools will be provided training, lasting 30-40 days. The training of teachers working in EGS and AIE is a massive task and the Government is planning to use distance open mode in this training.

EVALUATION OF INSET

In a comprehensive study (Arora & Singh 1997), it was found that evaluation and the follow-up of INSET programs were the weakest link in the chain. This is because the evaluation of INSET is patchy and fragmented. A comprehensive evaluation should focus on four aspects: What inputs were provided to launch the program; how the program was implemented (process aspect); what the outputs of the program were, and what the context was? Inputs provided to any training programs ensure quality and have impact on the output. These need to be evaluated comprehensively. Further, there are a series of questions: Who are the target trainees? How are they selected? Who are the resource persons and how they are selected? What are the qualities of audio-visual materials made available during the in-service programs? What is
the quality of support material (print) provided to the participants? What are
the other facilities made available to the participants? Is the venue suitable?
All these questions are relevant and have implications for input evaluation.

Like input, process aspect needs proper evaluation. Does the program list
training goals (instructional objectives)? Were trainees involved in designing
the course outline of the training program? How is the need for the program
assessed? Who did the need assessment? What was the mechanism of doing
needs survey? Does the training program contain specific details of day to day
time schedule? What sessions are missing? Is the training methodology
appropriate? Does the training design indicate availability of study materials?
Are the study materials print based or multi media in nature? Are the materials
textual or structured? Do the materials contain graphics (map, charts,
diagrams, cartoons, photographs, etc.)? Is there a mechanism whereby
feedback is communicated to trainees on their progress? Is there any
mechanism for follow up? Is there any mechanism for maintaining, revising,
and updating instructional materials?

Like input and process, the output of a program has to be evaluated
comprehensively. Evaluation of a program may be done at the program level,
the trainee achievements level, and at the field level (i.e., impact study
conducted to find out to what extent the learnt behavior of participants
changed the behavior of students.). In other words how far the trainees were
able to translate the gains of training programs into field situation. It may be
said, in all honesty, that in-service programs are not evaluated properly
(Reddy, 1999).

Educational, technical and social contexts play an important part. Evaluation
of context may revolve around, whether the program is critical to the overall
teacher development, was the program timely, does the program have adequate
administrative and management support, how does the program contribute to
cost effectiveness, relevance, quality and equity issues?

CHALLENGES AND ISSUES

INSET is an important component of teacher development. It has live
relations with pre-service education as well as field realities. Each teacher
should undergo and attend some in-service education after every four to five
years. Looking to the massive number of school teachers in India (nearly 5 million teachers) and the limited availability of facilities and resources, the INSET system needs drastic review. Some of the key questions of review are as follows:

- Can INSET be relocated in schools or at school cluster centers? Can it become school-based?
- Can in-service teacher education programs evolve out of pre-service programs and then accredited so that pre- and in-service training programs become inseparable?
- Can all pre-service institutions be made bimodal institutions (i.e., delivering both pre- and in-service courses - in the Indian context, it has been done partly)?
- Can all INSET programs build distance and telecommunication technologies in their delivery mode and offer online courses?
- In the United Kingdom, local education authorities do not offer in-service teacher education program. They support schools to launch school-based INSET and provide funds for grant related to in-service training schemes (see, e.g., Aplin, 1999). Can this system be adopted in India? Can something similarly be started in one or two districts on a pilot basis? (In 1976-77, the Scheme of Teachers Resource Centres was launched but then it got discontinued. There is a need to review and revive the scheme.)
- Is it possible to set up an open learning teacher center in each district?
- How can the isolation of teacher training institutions be removed?
- How can the teacher training institutions come closer to universities on the one hand and schools on the other?

In-service education needs restructuring, reorganizing, and reengineering. Reengineering education for change has been a stimulating theme in this region (UNESCO-ACEID, 1997). As reengineering has been described as fundamental “rethink and radical redesign of business process” for “dramatic achievement in critical contemporary measures of performance such as cost, quality service and speed” (Hammer & Champy, 1993, p. 32), one would like to see aspects of reengineering used in pre- and in-service teacher education. One aspect of reengineering could be the making of pre- and in-service teacher education a seamless activity. Pre- and in-service teacher education in India still operate in two separate worlds. This idea has been emphasized by Torres Rosa Maria (1996) that teacher education should move from rhetoric to action and undertake paradigmatic change by building “unified teacher education and training system which views pre-service and in-service learning as a
continuum” (p. 33). An efficient teacher in the opinion of the World Bank (1995, p. 7) is one with good knowledge of each subject and a wide repertoire of teaching skills. That needs ongoing continuous training and re-training, and establishing links with university departments is necessary so that teachers’ advances in subject areas could be shared.

INSET has another delicate task of character-building of students and therefore should be conducted to train teachers in developing affection, love, understanding, care, sensitivity, and respect for students and their differences. A teacher must develop within himself or herself the capacity to innovate. Rabindranath Tagore (1962 p. 186) has said “a lamp can light another lamp only when it continues to burn in its own flame.” This aspect of developing skills and attitude for lifelong learning need be reinforced through INSET. In-service programs should also try to develop what Fritz (1989) calls creative tensions. One of the key occupations of in-service program should be to make teachers reflective learners and to sensitize them towards what Eisner (1991) calls “deeper mission of schooling,” promoting curiosity, growth of imagination, and refinement of sensibilities. INSET must develop a symbiotic relationship between action research and classroom practices. And above all, INSET must develop teachers as co-learners. “The capacity to learn is the capacity to alter what one is and has been. It places the present at risk” (Scheffler, 1985, p. 122)

INSET programs will have to keep in view competencies and commitment of trainers. The theme of the training and the environment of the training institution play a significant role. The effect of INSET programs do not depend upon a single factor but on the interconnectedness of multiple factors like the quality of stimulus provided to the trainees, the training environment, the knowledge and beliefs of trainees, and their professional commitment. Further, the change has to come not only in the domain of the teacher’s knowledge and beliefs and attitudes, but as well in his or her practices that he or she is expected to undertake in the school situation. Other important areas for INSET are to develop life skills, positive attitude towards the culture of peace, and sustainable development (Gregorio, 1996). Life skills can be viewed in different ways. One way is to see life skills as skills in communication, cooperation, and creativity. Other way is to see life skills as anticipation, exploration, participation, and extrapolation (Peiris, 1996, p. 314-315). In most of the INSET programs, these new thrust areas are a rarity. Fortunately, planners of INSET in India are gaining a growing awareness that
unless teachers are trained to become action researchers, co-learners, and partners in curriculum design. Mere development of pedagogical skills will not serve the purpose.

CONCLUSION

The role of INSET has never been more obvious than today. In the present setting of globalization, fast telecommunications, and interdependence, teachers have obligation to develop "praxis of heart" (Hicks, 2000), to mould the minds and character of the new generation to suit globalization, localization, and individualization, and to develop a catholicity of outlook. Society expects that teachers have an obligation to become more proficient in their art and science of teaching, more competent, and more committed. INSET with its wider connotation of study leave, exchange programs, attachment, sabbatical leave, school-based programs, and extension programs has become very relevant as never before. In this scenario, the professional training culture has to be developed of which would oblige the trainers to be more efficient and energetic in the delivery of programs, and the trainees to become more reflective, attentive, and innovative in assimilating the message. To make INSET effective and efficient, participatory approach to training design will have to be undertaken (Harding, 1996, p. 239). Further community participation will have to be sought to ensure training of critical mass of teachers, information and communications technologies will have to be used in all teacher training programs more meaningfully and more extensively.

The emergence of an enlightened society and a happier world depends largely on the mental set of teachers. Attempts need to be made to reorient teachers to the dangers of hatred and violence, mindless consumption, and needless accumulation. INSET should become an instrument to build in them defenses of peace, cultural plurality, and respect for "otherness." Agenda to develop this sort of mind-set in teachers in India is still in low key. At present, on this front, Indian INSET is moving slowly or very slowly. It needs to change its trot into gallop.

NOTES

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NCERT, India. He has been the founder Director of the National Open School and the Principal of Regional Institute of Education, Ajmer, NCERT. He was consultant in the Commonwealth of Learning (COL) Vancouver, Canada, and later on assisted NCTE, India, in the capacity of a consultant. Presently, he is honorary Advisor to Director, NCERT.

REFERENCES


Symposium

Teacher Education Through Distance Learning

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Abstract
The development of distance education in India since 1962 has been phenomenal. This paper reviews the developments of Indian distance education, paying specific attention to distance education for teachers of secondary and primary schools as well as teachers in higher education institutions. The paper also examines the various achievements and issues of the distance education system in relation to meeting the critical need of providing Indian teachers with quality professional education and development opportunities. The analysis conducted indicates that, while the achievement and progress made have been impressive, Indian distance education generally and distance teacher education in particular are in need for further improvement.

Distance education plays a uniquely important role in the provision of education to students and teachers. This paper reviews its development and then examines the distance education for teachers. The purpose is to highlight the various issues that need be addressed and to share the successful experiences in India with educators elsewhere.

THE DEVELOPMENTS OF INDIAN DISTANCE EDUCATION

The growth and development of Indian school and higher education have been phenomenal, especially after India’s gaining independence in 1947. The policy of restricted and elite education adopted by the colonial regime was then transformed to what is known as “massification of education,” with equal concerns for access and equity. With 20 universities at the time of independence, the higher education system today has grown into 274...
universities and 13,000 colleges, together with 8 million students and 350,000 teachers.

The share of distance education is 64 dual-mode universities (correspondence course institutes) and ten open universities, including the Indira Gandhi National Open University, which on the one hand offers academic programs and on the other hand perform also the functions in the capacity of a statutory authority to regulate and fund (as well as maintain quality for) the distance education system in the country through its Distance Education Council. The system caters to about 17% students (20% for cumulative enrolment) of higher education in India with a variety of largely unconventional education, training, research, and extension programs (Panda, 2002). The ten open universities together offer 294 programs, comprising 1,966 courses, with the help of 98 regional centers, 3,137 study centers, 38,662 part-time counselors, and 3,449 full-time teaching, professional, and non-teaching staff (Garg & Panda, 2002).

In the school sector, in 1998-99, for the total child population of 190.54 millions, making up 19% of the total population, the enrolment ratio for grades I-V (age 6-11 years) was 96.89% and for grades VI-VIII (age 12-14 years) 56.82%. In secondary schooling, nearly 35% of the relevant age group participated in the process, and six out of 100 enrolled at grade I complete grade X. The formal schools and non-formal education centers have the capacity to enroll about 150 million children, and therefore about 40 million children are out of school. Arguably, then, open schooling has been considered as the best viable alternative to cater for the achievement of the 2001 legislation of the Indian Parliament – that is, free universal elementary education for children of 6-11 years of age as a fundamental right (Panda & Garg, 2003).

Correspondence education at the school sector started in 1965 by the Board of Secondary Education, state of Madhya Pradesh. The Open School in New Delhi was established in 1979 as a project of the Central Board of Secondary Education. In 1989, the Open School took the form and structure of a National Open School (NOS) under the Union Ministry of Human Resource Development with the dual objectives of offering schooling and basic education and later of coordinating and maintaining standards of open schooling in the country. Today, there are 17 institutions (including the NOS and 8 state open schools), which cater to the educational needs of about 3% of the total secondary and senior secondary students in India.
DISTANCE TEACHER EDUCATION

In India, distance education is one important means for providing secondary and primary/elementary school teachers with professional training.

Secondary Teachers’ Education

At the time of independence, there were nearly 46% untrained secondary school teachers in India. In additional to other institutional arrangements, one-year teacher training institutions were established in many states of the country basically to cater for the training needs of pre-service teachers. The programs so provided, however, were insufficient to providing education that would meet the requirements set for trained teachers and to satisfying the need for in-service training for untrained teachers. In 1970-71, out of the 630,000 secondary and higher secondary teachers, there were 24.64% untrained teachers. Then, with massive efforts, especially distance education, in 1990-91, there were still nearly 9.05% of 1.27 million teachers untrained. Much work therefore needs be done, notwithstanding the noted improvement in reducing the proportion of untrained teachers.

The 1960s saw the initiation of correspondence teacher education: in 1966, the Central Institute of Education (later known as the Faculty of Education) of the University of Delhi initiated a B.Ed. program through correspondence-cum-contact (National Council of Educational Research and Training [NCERT], 1990), followed by the University of Bangalore and the Regional Colleges of Education of NCERT. This was in pursuance to the 1968 delegation to the erstwhile USSR for teacher training and its strong recommendation for teacher training through correspondence education (University Grants Commission, 1972).

By 1991-92, out of 46 university level correspondence course institutes and six open universities, 15 correspondence course institutes and two state open universities were offering B.Ed. program through the correspondence/distance mode. The highest enrolments were at the correspondence course institutes of Maharishi Dayanand University (with 33,000 students) and Annamalai University (21,417 students), and the Kota Open University had about 9,000 students in 1988-89. The lowest was 223 students enrolled in Kakatiya University (Koul & Menon, 1992). With the massive efforts expended, in absolute terms, the number of untrained teachers came down from 155,000 in
1970-71 to just 115,000 in 1990-91. This was largely due to the facts that the enrolment in B.Ed correspondence education was not necessarily from the in-service sector (there were pre-service students too), that the number of teachers doubled between 1970-71 and 1990-91, and that there was still the practice of state governments appointing untrained teachers in secondary and senior secondary schools.

During 1996-97, nearly 10% of the 1.5 million teachers were untrained. Further, in order to educate them to the extent that they are can acquire a full teacher training qualification, massive efforts were needed. While realizing the importance of such a massive effort, the National Council for Teacher Education (NCTE) - a statutory body of the Government of India to regulate and maintain quality of teacher education in the country - also expressed grave concern with regard to the quality of teacher education through distance mode. It issued strict guidelines to discontinue the practice of pre-service distance teacher education and to concentrate on the provision of quality in-service distance teacher education, setting a rule under which each institution could enroll no more than 500 teachers in a year. Given the satisfactory quality of in-service teacher training by university level correspondence course institutes, of which has been reviewed from time to time, the open universities took to the initiation of quality in-service distance teacher education.

During 1990-96, three state open universities - Kota Open University, Yashwantrao Chavan Maharashtra Open University, and Baba Saheb Ambedkar Open University - began to launch in-service programs. Their large scale enrolment at the cost of quality attracted the attention of NCTE and the Distance Education Council of IGNOU. This led to the intervention of IGNOU by initiating a two-year distance education B.Ed program, which, with English and Hindi as the media of instruction, can be completed by students admitted into the program within four years from the date of their admission. In-service teachers with a bachelor degree and two years of full-time teaching experience sit through a nation-wide entrance test. Then, on clearance, they could get admitted into the two-year program and attached to one of the IGNOU’s regional centers. The program, offering a mix of theory and practice courses, is in its third cycle. In brief, the entire program is divided into four groups or components: the Group A component - “core courses” - comprises five compulsory courses, with each course bearing three credits of theory and one credit of practice (one credit translates into 30 student study hours); Group B - “content-based methodology courses” - provides for options in five school
subject areas, out of which two teaching subjects (courses) have to be chosen, while each course bearing three credits of theory and one credit of practice; four courses make up the Group C component - "special course" - and only one course has to be chosen, bearing three credits of theory and one credit of practice from the options of educational technology, computer in education, guidance and counseling, and distance education; Group D comprise three courses, which are all compulsory - school based practice, bearing four credits, workshop based practice (four credits), and teaching practice (eight credits).

The instructional system adopts a multi-media approach, delivering self-learning printed material, audio and video programs, offering counseling sessions at designated program study center (i.e., one college of education in each state), conducting practical work in schools and workshops, and making practice assignments for courses of Group A, B and C, carrying a total of eight credits. The media programs are supplementary and available through national telecasts and the 24-hour educational channel of Gyan Darshan, up-linked from the electronic media production center at IGNOU campus. Assignments are compulsory: three tutor marked assignments for each theory course - of these, only best two per course are considered (i.e., 16 assignments for eight theory courses, plus one compulsory practical assignment for each course). The assignment responses submitted at the program study center are commented and graded by academic counselors and then dispatched to students for self-study. Besides weekend counseling and occasional teleconferencing, students may attend nationwide interactive radio counseling through toll-free telephone. Expectedly, the on-going establishment of regional and local FM radio stations by IGNOU shall facilitate regional programming and broadcast in regional languages.

Three types of practice-oriented arrangements - school-based, workshop-based, and practice teaching - are made at designated schools and teacher training colleges. In addition, a student needs to attend two practice workshops - each with 12 days duration to develop skills and competencies required for effective teaching. A student teacher goes through almost 300 hours of contact time, and undertakes practice activities under the guidance of a supervisor from the teacher training college or program study center. The continuous evaluation, which goes on during the two years of study, carries 30% weightage and the term-end examination (twice a year) 70% weightage. To ensure quality, three forms of evaluation of practice courses are employed - continuous evaluation
of practical assignments, school-based activities and practice teaching; evaluation of practice workshops; and evaluation of practice teaching.

Primary/Elementary Teachers’ Education

Unlike secondary education, which has distance education started with both in- and pre-service education and then ends up with in-service education only, education for primary and elementary teachers is imparted through Basic Teacher Training Institutes, while District Institutes of Education and Training (DIETs) have always been for in-service. Nearly 12% of the three million teachers at the primary and elementary level are untrained; nevertheless, no serious effort has been made to address the training needs of these teachers through distance mode. Both NCERT and IGNOU have made attempts to provide untrained in-service teachers with training through a combination of print, teleconferencing, and face-to-face interaction. These efforts can be classified into three categories: training involving DIETs; information and communications technologies (ICT) for professional development of teachers; and IGNOU involved primary teacher education.

Training Involving DIETs. About 3 million primary and elementary teachers need recurrent orientation to innovations in teaching and learning at the school level. DIETs have been charged with this responsibility. Of the 520 districts in the country, there are 424 DIETs, which are able to meet the training needs of 0.3 million teachers every year, out of a total of three million needy teachers (Pandey, 1999), meaning thereby that it will take ten years to cover all the teachers at the pre-secondary level. NCERT has made considerable efforts through the Special Orientation of Primary Teachers (SOP) scheme in the past years to train primary school teachers as well as teacher educators housed in DIETs. The teaching end through print-cum-teleconferencing-cum-f2f interaction is located at the teleconferencing studio of IGNOU, and the learning ends, where teachers gather for training, are the DIETs which have downlink, interactive (audio and video), and toll-free telephone facilities. The pre-telecast activities include networking of institutions, identification of learning ends and Indian National Satellite up-linking, development of reading materials and video clippings, training strategies, and actual orientation. The telecast activities had three components: presentation, live interaction, and mid-term evaluation. Summative evaluation focuses on the post-telecast activities. Two-day programs were organized in 1996-97 on an experimental basis. The results show that the programs had significantly
enriched the training programs of NCERT, particularly the distance primary teacher training programs of the District Primary Education Programme (DPEP) of IGNOU. Pandey (1999) concluded in a post-telecast study that “In terms of its impact, this alternative strategy can substantially reduce transmission loss in training at successive levels, which invariably accompanies multi-tier cascade training model” (p. 222).

ICT for Professional Development of Teachers. ICT has been extensively used in Indian teacher training, though on an experimental basis, while only a few institutions, particularly IGNOU, have been able to mainstream its application for course design and course delivery. Radio and television have been extensively used for the purpose by NCERT and IGNOU. An experiment on audio teleconferencing for primary teachers of the Indore district of Madhya Pradesh through the All India Radio, Indore, indicated that the program was broadcasted at three phases - asking questions on telephone, initiation of discussion by the facilitator, followed by discussion on solutions by the experts - and that some of the crucial problems related to proper planning and coordination among different agencies, and identification of appropriate themes and concepts for discussion at the conferencing were identified (Pal, 1999).

Since 1993, IGNOU has been using one-way video and two-way audio teleconferencing for distance teaching, including that for teacher training. Since the first experiment in this year on extended C-Band by IGNOU, other organizations, such as NCERT, DPEP (DEP), British Council, and state education departments of Gujarat, Karnataka, and Madhya Pradesh, have used this technology for teacher training. The DEP-DPEP has been using this technology on digital transmission (while others have been analogous so far). Menon and Phalachandra (2001) concluded after reporting a brief survey that ICT can successfully disseminate information to large numbers of recipients, and inculcate skills through the mechanism of demonstration followed by practice, interaction, and experience sharing.

IGNOU Involved Primary Teacher Education. Since 2001, IGNOU has been offering a Certificate in Primary Education designed for the teachers of Sikkim and the northeastern hilly states of India, where there are a large number of untrained school teachers and where there is a communication facility problem. There has been considerable development initiative for the North-East by the Prime Minister’s Office, and IGNOU’s involvement for
distance education and training covers many areas, including teacher training. There are about 175,000 untrained primary school teachers in these states, and IGNOU has been identified as the nodal agency to offer a six-month Certificate in Primary Education from 2002-2003 to clear this backlog within the next five years. The entry qualification is matriculation or 10+2 schooling pass. The 18 credit program comprises ten credits of theory (four courses) and eight credits of practice. Initially, course materials are to be made available in English and Hindi, and subsequently they are made also in regional languages of Assamese, Bengali, Garo, and Khasi. The four theory courses cover the teaching of language, mathematics, environmental studies, and understanding of primary school children. The practice domain includes school-based activities, workshop-based activities, and teaching practice for 20 lessons (ten lessons in workplace, five lessons in workshop, and five lessons outside-the-workplace). Instructional components include self-earning printed materials, audio and video programs, face-to-face counseling at DIETs, colleges of education, IGNOU regional centers, and the IT/community learning centers of IGNOU. Assignments, practice at designated institutions, work-related field project, video-telecasting by Doordarshan (national television network), broadcasting by All India Radio, teleconferencing from IGNOU studio, phone-in radio counseling, and Gyan Darshan (television transmitted through cable networks) and Gyan Vani (radio cooperative). In all, there shall be 30 hours of face-to-face intensive counseling, 16 hours of teleconferencing, eight hours of phone-in radio counseling, and ten hours audio and eight video programs. There shall be an apex committee at the state level to monitor the program.

Clearance of 175,000 teachers in the next five years means that for each cycle of the certificate, more than 15,000 teachers need to be admitted. While the funding support and coordination amongst the states shall be extended by the Union Ministry of Human Resource Development, the state governments shall take care of the provisions at the state level and selection of teachers for each cohort of the certificate. Then, NCTE shall develop norms and guidelines, recognize the certificate program and the learning centers, and liaise with all the agencies involved. Further, IGNOU shall design, develop, and deliver the program, conduct student evaluation, award certificates, and maintain the program through the five-year cycle (IGNOU, 2001).
DISTANCE TEACHER TRAINING

Distance teacher training varies considerably across distance teaching institutions in the country, while the most commonly employed tactics include using self-learning material, giving student assignment, making personal contact program for a few weeks once or twice a year, arranging teaching practice, and giving term-end examination. IGNOU, through the initiation of various teacher education programs - postgraduate diploma in higher education, postgraduate diploma and masters in distance education, certificate in guidance, bachelor of education, and certificate in primary education - has enhanced the quality of distance teacher education programs in India in respect of curriculum development; course design, development, and delivery; use of media; learner assessment; and quality of student learning. Some of the features of distance teacher education practiced by IGNOU, including the use of credit system, modularization, enhancement of openness and flexibility, rational course design and development, and effective program delivery, are highlighted in the following paragraphs.

Each program follows a credit system under which one credit is equivalent to 30 student study hours (for comprehension of learning materials, working on in-text learning activities, working out assignments, making attendance of compulsory extended contact programs, participating in school- and workshop-based activities, conducting teaching practice, and taking term-end examination). Each program is divided into five to six courses, with each course comprises five to six blocks (booklets) - each block consists of five to six units. Invariably, one block is worth one or one-and-half credits. Then, there is teaching practice bearing two-, four-, six-, and eight-credits. Media support has so far remained supplementary. Credit transfer to the extent of 50% of previous learning is possible provided 75% of course materials of IGNOU and the other institution broadly tally each other.

Course materials are modularized - that is, each course is independent of the other, and it can be used for creation of a new course and also can form part of another certificate or diploma program with little adaptation in the level of presentation, content load, and conceptual understanding. Modularization also facilitates easy ascendance from certificate to diploma, and further to bachelor and master degree programs.
The open learning system provides for greater openness and flexibility, besides self-learning at a distance. For teacher education in general, any one with pre-requisite qualification and requirements - for instance, should be currently employed a teacher, should have taken and passed a nation-wide entrance test for enrolment into the B.Ed program, and the like - is eligible for admission into any teacher training programs. One can proceed at one's pace, go on accumulating credits by completing assignments and term-end examination required by respective course, and then complete the program within the maximum limit of duration as prescribed for the respective program - usually a one-year program can be completed within a maximum of four years, after which one has to re-register for the program. School-based and workshop-based activities, as well as activities and/or projects undertaken at extended contact programs, provide for enough flexibility to negotiate projects and activities with the counselor/supervisor/mentor from a basket of such projects and activities as prescribed by the respective program.

Course design and development follows a rigorous procedure, with quality checks at every stage of the academic program. The usual procedure has been that a faculty member serves as the program coordinator and develops, with the help of expert committees, the curriculum blueprints, including broad contents, instructional design, program delivery, etc., which passes through various statutory bodies of the respective university - school board (for program initiation), planning board (for program funding and viability), academic council (for all related academic aspects, including program delivery), and board of management (for approval as the final university authority).

Generally, program development follows a varied form of course team approach under which the program coordinator, expert committee chair, course writers, course editors, media specialists, graphic artists, distance education experts, and the like form a team to oversee the development of the course package and the specification of program delivery mechanisms. The commonly used model is the coordinator-writer-editor model (see Figure 1), with which the coordinator faculty is responsible for all the activities, including especially the initial curriculum design (Panda, Khan, & Garg, 1999). The writers prepare course materials and audio and video scripts, while and the editors (language, content, and/or distance education) edit the course units at various stages. Mostly, the writers and content editors are not members of the respective university, but are drawn from a pool of national resource persons.
Audio and video program production and the translation of courses into other regional languages (out of nationally recognized languages) are undertaken either simultaneously or at the post-print production stage.

![Diagram: Coordinator-writer-editor Model](image)

**Figure 1: Coordinator-writer-editor Model**

Gradually, most of the programs are now being developed through collaboration and partnership. The initiation in open universities was made with the development of the Certificate in Guidance program in collaboration with the NCERT. Figure 2 depicts the collaborative workshop model for the development of this program. The model prescribes the formulation of a collaborative action plan and the coordination between the Course Coordinator (IGNOU) and the Course Coordinator (NCERT) via-a-vis the IGNOU Expert Committee (comprising experts from both IGNOU and NCERT, in addition to others). The interesting part of the model is that “the larger part of the materials is developed in a workshop situation by practitioners in the area. This has resulted in the development of excellent course materials in this professional area meant for primary school teachers” (Panda, Khan, & Garg, 1999, p. 250).
Figure 2: Collaborative Workshop Model

The program is delivered through print, audio, video, teleconferencing, interactive radio counseling, counseling at program centers, and teaching practice conducted at program centers and work centers, which are established all over the country. The work center is a high school where teaching practice and school-based activities are carried out. A teacher training college in each state, responsible for handling 100 distance teacher training students, acts as the program center where academic counseling and practice-oriented workshops are conducted. The school-based activities and practice involve the student in the administration of psychological tests, organization of health education activities, construction of question papers, preparation of time-table, organization of debates and symposia and sports activities, development of media materials, and the like. Also, teaching subject area participation in club activities is included. The resource person in the work center evaluates these activities. The program centers organize workshop-based professional practices, which involve improvement of teaching competence through preparation of audio-visual aids, team teaching, model lesson plans, problem-solving exercises, and community development activities. These are evaluated
by the academic counselor, who also provides regular academic counseling for
the whole cycle of the program.

TEACHER TRAINING FOR HIGHER EDUCATION AND
DISTANCE EDUCATION SYSTEM DEVELOPMENT

In addition to the teaching training activities described and reviewed above,
there have been considerable efforts undertaken by IGNOU in offering
distance teacher training for conventional college and university teachers and
for those involved in the system of distance education (i.e., higher education
and open schooling).

Teachers of Higher Education Institutions

Regarding higher education, the University Grants Commission had
established 48 academic staff colleges in 48 conventional universities in the
country for two purposes: to upgrade one’s subject competence through some
three-week refresher programs, and to get acquainted with educational
pedagogy via some four-week orientation programs. A college/university
lecturer needs to attend one orientation and one refresher program within five
years after receiving the appointment to get qualified for promotion to the post
of senior lecturer, and subsequently two refresher programs for promotion to
associate professorship.

Started with a very noble objective (and which is still continuing), the whole
exercise was in need of quality input to help make teacher educators
competent. IGNOU therefore initiated a Postgraduate Diploma in Higher
Education in 1992 for college and university teachers through the distance
education mode. This is available to anyone who has a postgraduate degree.
The 34 credit program comprises four courses of six credits each, project work
for six credits, and a ten-day compulsory extended contact program bearing
four credits. The instructional components include printed self-learning
materials, assignments, audio and video programs, counseling at study centers,
teleconferencing, extended contact workshop, and term-end examination.
Menon and Dash (1997) noted that the project work, which is very crucial to
the program, provide students with an opportunity to articulate the reality of
the content of training through practice. Further, in the extended
contact program of 60 hours, nearly 20 hours are devoted to teleconferencing sessions and related activities.

The Postgraduate Diploma in Higher Education is obviously a generalized professional development program covering wider areas of concern in higher education. Thus, it is arguably justified that specialized professional development programs in areas - for instance, of higher education management, technology and teaching-learning, research in higher education, etc. - are required so as to develop specialized abilities in higher education teachers. This, in a way, shall significantly contribute to higher education system development.

**Distance Higher Education**

Given the phenomenal expansion of the open university and distance higher education systems in the country, it was essential to initiate a diploma program in distance education. Indeed, as one of the first two programs initiated by IGNOU for both short-term and long-term staff and professional development in distance education, such a diploma course was initiated in 1987. It was later converted into a postgraduate diploma program (requiring the taking of 30 credits) and a master in distance education (also 30 credits) programs. The Commonwealth of Learning (COL) supported the offering of both programs internationally in 15 countries, with 60 out of 100 students who had successfully completed the programs. The programs are now offered in 2002 in 10 additional countries, supported again by COL. Besides, the UNESCO Institute for Capacity Building in Africa has offered these programs in African countries located in north and west of Africa. The Nigerian government also offers this program nationwide with support from COL. Largely, those engaged or wish to engage in various aspects of distance teaching, including course design and development, student assessment, learners support and counseling, media, economics of distance education, planning and management, research in distance education, and the like, get admitted to these programs. Instructional support is provided through the undertaking of a series of activities, including regular counseling at study centers, audio and video programs, television broadcast, interactive radio counseling, assignments, project, and term-end examinations.

These two programs have been able to generate a large pool of distance teachers and educators internationally. Nevertheless, it is gradually being
realized that a distance teacher development program on distance education should itself incorporate all the best practices of distance teaching-learning. And therefore, those programs need to be revitalized as such, particularly in their online delivery, if the programs have to compete successfully with similar programs in the future.

CONCLUSION

All in all, Indian distance teacher education has been in operation since 1962 and has greatly improved in the past 15 years, achieving a lot in terms of curriculum development, instructional design and delivery, media support, learner assessment, and partnership and collaboration. However, it has to be examined to what extent the gained knowledge and skills on best practices get transferred to the actual classroom teaching. It must be noted that research and development has been the weakest link in the whole operation.

In addition to the studies conducted by Menon and Phalachandra (2001), Pal (1999), and Pandey (1999) mentioned in the preceding sections, Phalachandra (2001) has compared in a recent study distance primary teacher training through teleconferencing, face-to-face, and multi-channel modes, concluding that the achievement test results for all the three modes were the same, while teleconferencing is, on the one hand, cost-effective in organization and presentation and, on the other hand, more effective than the other modes in respect of participants’ involvement, quality of interaction, and adherence to schedules. The studies are scanty, however. There is a need for pursuing a series of qualitative studies on what and how they contribute to significant learning and professional development. What can be proposed is a host of constructivist continuing professional development programs to be tried out in the Indian context.

Furthermore, a critical challenge is the maintenance of quality distance teacher development in the light of a huge number of teachers who need to achieve continuing professional development, particularly within the context of significant ICT developments in the country. It is time now to think of distance learning interactive multimedia and online programs within a constructivist perspective and the framework of continuing professional development. IGNOU offers four academic and training programs online; the Yashwantrao Chavan Maharashtra Open University offers two programs; and
the M.P. Bhoj (Open) University provides for ICT training through community kiosks (Panda, 2002). It will be desirable to seriously consider interactive and flexible learning, and to work towards collaborative professional development at a distance and further capacity-building for its cyclic design, development, and delivery.

NOTES

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