PHILOSOPHICAL PERSPECTIVES ON TEACHER EDUCATION

Dr. Suman Rani

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Preface

Philosophical perspectives play a foundational role in shaping the theory and practice of teacher education. At the core of teacher preparation programs lie philosophical inquiries into the nature of education, the role of the teacher, and the purpose of schooling. These inquiries are grounded in various philosophical traditions that offer different lenses through which educators perceive their roles and responsibilities. One prominent philosophical perspective in teacher education is constructivism, which emphasizes the active construction of knowledge by learners. Teachers are viewed as facilitators who guide students in constructing their understanding of the world through hands-on experiences and interaction with their environment. This perspective underscores the importance of student-centered approaches and inquiry-based learning in teacher preparation.

Another significant perspective is critical pedagogy, which draws on Marxist and feminist theories to examine power dynamics in education and society. Critical pedagogues advocate for social justice and aim to empower students to critically analyze and challenge systems of oppression. In teacher education, this perspective encourages educators to reflect on their own identities and biases and to create inclusive learning environments that promote equity and diversity.

Pragmatism, a philosophical tradition rooted in the work of John Dewey, emphasizes the importance of experiential learning and problem-solving in education. Pragmatic educators view teaching as an ongoing process of inquiry and experimentation, where teachers adapt their practices to meet the needs of their students and the demands of their environment. This perspective highlights the value of hands-on learning experiences and encourages teachers to engage in reflective practice.

Existentialism offers another lens through which to view teacher education, emphasizing the importance of individual freedom, choice, and responsibility. Existentialist educators encourage students to explore their own values, beliefs, and purposes in life and to develop a sense of agency and authenticity. In teacher preparation, this perspective underscores the importance of fostering meaningful relationships with students and creating opportunities for self-expression and personal growth.

In addition to these perspectives, teacher education programs may also draw on philosophical traditions such as humanism, postmodernism, and critical race theory to inform their curricula and practices. By engaging with diverse philosophical perspectives, teacher educators can enrich their understanding of teaching and learning and develop more holistic approaches to teacher preparation that empower educators to meet the complex challenges of today's classrooms.

Exploring the philosophical underpinnings shaping teacher education in a dynamic educational landscape.

–Author

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Teacher Education in India: An Auxiliary Perspective

India is a vast heterogeneous country in terms of culture, environment, language and the genealogical diversity of the people. Heterogeneity has, therefore, resulted in diverse educational goals. A majority of the schoolage population (approximately 70%) consider schooling to be merely a literary program i.e., reading, writing, arithmetic; 5% utilize education for its ascribed status. An important 25% pursue education for a career or simply to earn a living in a world that places a high degree of importance on academic status.

It is basically this 25% of the student population which happens to exploit all opportunities the system has to offer. Innovations, modernization and improvements in schooling has had a positive impact. That a majority of India's school children are on the periphery of educational modernization is an ethical issue for which one cannot provide easy solutions.

RENEWED INNOVATIVE ENDEAVOURS

Toward improving the quality of teacher education in India during the seventh Five Year Plan (1986-1990), many innovative endeavours were (and continue to be) enthusiastically pursued. These innovative efforts could be broadly classified as: 1. National endeavours, and 2. Regional endeavours. Following are the highlights of each.

NATIONAL ENDEAVOURS

During 1986, the Department of Education under the Ministry of Human Resource Development (MHRD) made a national effort especially involving

many classroom practitioners, in documenting the National Policy on Education (NPE) (MHRD, 1986a). Among the major thrust areas was teacher education. Emphasizing the usefulness of educational technology, the innovative use of satellite instruction television programs and the PMOST (Programme of Massive Orientation to School Teachers) at both the elementary and secondary levels were launched from 1985-1987, and continues to be popular among many educators across the country.

The educational responsibilities at the national level by the central government's department of education are activated through specific organisations such as:

(a) *The National Council for Educational Research and Training (NCERT):* The organisation conducts research, pre-and in-service teacher education programs throughout the country;

(b) *The National Council of Teacher Education (NCTE):* Under the aegis of specific Task Force groups, both the NCERT and NCTE network at the organisational and academic levels to increase the participation of the regional centers. The priority areas in each Task Force have been detailed in the Policy (synonymous with Programme) of Action (POA) (MHRD, 1986b). The POAs are documents that serve as a guideline for all regional educational endeavours;

(c) *The National Council for Women's Education (NCWE):* This organisation promotes programs to encourage women to pursue education at all levels-formal, informal and non-formal. Working with the regional centers, the NCWE has made significant strides and has been quite successful in its efforts to provide a complete education to girls even beyond the secondary school and graduate levels; (d) All India Council for Technical Education (AICTE). This organisation concerns itself with the development and implementation of effective technical education programs in the country; and,

(e) *The National Council for Science Education (NCSE):* Along with the other organisations, the NCSE works to enhance and promote the quality of science and technology education. "Science and technology have in fact assumed so much importance that while individuals look for scientific solutions to even their day-to-day problems, nations depend upon an adequate number of technical personnel for overall development" (Anand, 1983).

In addition, the central board of education promotes the pursuit of vocational education especially among the physically and mentally handicapped. Special education programs are often a part of the elementary, secondary, graduate and postgraduate teacher education curriculum. Educational technology and innovate methods in teacher education and science education has received considerable attention from the Central Institute of Educational Technology (CIET), the State Institute of Technology (SIET), and regional Technical Teachers' Training Institutes (TTTI). Mukhopadyay (1985) has detailed a superior documentary on the subject; summarizing the content of the publication is beyond the scope.

REGIONAL ENDEAVOURS

Unlike the NCERT, the endeavours of such state and regional level organisations as the State Educational Research and Training (SERT) and the District Institutes of education and Training (DIET) are more specific. The endeavours are pragmatic and directionally oriented toward the dissemination of tested and effective classroom practices; testing, evaluation and implementation of successful teaching-learning techniques; and other application-oriented ideas through pre-and in-service workshops for both elementary and secondary school teachers.

For instance, in the area of methods of teaching the functional aspects of many didactic models are brought together into an eclectic presentation. Some models that are considered include inquiry synectics, advance organizers, jurisprudence, principles of cooperative learning and problem solving, discrepant events, and so forth. Thus, in the place of a single approach to instruction, an extracted combination of effective approaches that are well-linked in terms of predetermined educational goals-for example, to be able to address a diverse audience of learners who exhibit different methods and speeds of learning-continues to be extensively practised in the country's classrooms and teacher education colleges. 'Model Blend' is the term that was given to this eclectic approach to instruction. In current educational parlance, this is known as 'instructional module', and it has been a successful innovation at the teacher education level. Indeed, the effectiveness of instructional modules at the Bachelor of Education (B.Ed.) degree level has been amply established by research.

EDUCATION, A SUB-SYSTEM OF THE SOCIAL SYSTEM

Education is a sub-system in the wider social system. Although it has a separate identity and, upto a limited degree, functions autonomously, it has linkages with the economic, political, religious, and other sub-systems which exert powerful influence on the goals and instrumentalities of the educational subsystem on the one hand and on its autonomy on the other. The economic sector has to find funds for education, for the later can rarely pay its own way. Power interests define and redefine the goals of education and from time to time seek to assign to it new instrumental rules. In several parts of the world education has cut its umbilical cord placed in religion, yet denominational institutions still continue, and otherwise also religion plays a role in determining the ideological overtones of at least some components of education.

Education can rarely free itself from social and cultural norms and has to relate itself to the ferments within the society. The state of health of one sub-system casts its shadows on the health of the other. In this respect education is especially vulnerable; while its intrinsic worth is universally recognized, it is also subject to many diverse pressures because of the multiplicity of instrumental roles that it is called upon to play. It has to deal with something of a paradox when on the one hand it has to transmit the cultural heritage and tradition, and on the other, has to function as a prime mover of change. In point of fact, the educational subsystem is not the only agency offering education, to begin with,

the domestic group, the neighbourhood, and the peer group have important educational roles and the educational process continues beyond the formal school stage through books, mass media, cultural, political, and religious intercourse, and interpersonal contacts of a wide variety. The formal education system has to take account of early socialisation and has to anticipate future educational processes.

THE NEED FOR GROWTH

All is not well, however, in these rapidly transitioning schools. Some teachers, administrators, and parents view their schools' increasing diversity as a problem rather than an opportunity. For example, in a school district on the West Coast where the number of Latino students has quadrupled in the past 10 years, a teacher recently asked me, “Why are they sending these kids to our school?” In another district outside New York City—where the student population was once predominantly rich, white, and Jewish but is now about 90 percent low-income kids of color, mostly from the Caribbean and Latin America—a principal remarked in one workshop, “These kids don't value education, and their parents aren't helping either.

They don't seem to care about their children's future.” In a school district near Minneapolis with a rapidly increasing black population, a white parent remarked, “Students who are coming here now don't have much respect for authority. That's why we have so many discipline problems.”

Other educators and parents, although less negative, still feel uneasy about their schools' new demographics. In a high school outside Washington, D.C., where the Latino immigrant population is increasing rapidly, a teacher told me that he was disappointed in himself for not feeling comfortable engaging his students in a discussion of immigration issues, a hot topic in the community in spring 2006. “I knew the kids needed to talk, but I just couldn't go there.” And a black teacher who taught French successfully for many years in predominantly white suburban schools told me recently, “When I first found myself teaching classes of mostly black kids, I went home frustrated every night because I knew I wasn't getting through to them, and they were giving me a hard time. It only started getting better when I finally figured out that I had to reexamine everything I was doing.”

This teacher has it right. As educators in rapidly transitioning schools, we need to reexamine everything we're doing. Continuing with business as usual will mean failure or mediocrity for too many of our students, as the data related to racial, cultural, linguistic, and economic achievement gaps demonstrate (National Center for Education Statistics, 2005). Rapidly changing demographics demand that we engage in a vigorous, ongoing, and systemic process of professional development to prepare all educators in the school to function effectively in a highly diverse environment.

Many education leaders in diversity-enhanced schools are moving beyond blame and befuddlement and working to transform themselves and their schools

to serve all their students well. From observing and collaborating with them, I have learned that this transformative work proceeds best in five phases: (1) building trust, (2) engaging personal culture, (3) confronting issues of social dominance and social justice, (4) transforming instructional practices, and (5) engaging the entire school community.

THE DEFINITION OF TEACHER QUALITY

The previous discussion underscores the complex and sometimes controversial nature of defining teacher quality. Two main elements were discussed— teacher preparation and qualifications, and teaching practices. The definition used in this report is based on the former rather than the latter. Teachers' professional preparation (as well as their working conditions) has been identified as fundamental to improving elementary and secondary education (Carnegie Forum on Education and the Economy, 1986; Holmes Group, 1986; NCTAF, 1996). Policymakers today are especially interested in the training and education teachers receive in the subject areas they teach; high-quality teacher preparation and qualifications are expected to lead to high-quality teaching. For these reasons, a national profile of teacher preparation and qualifications provides important information about the quality of America's teachers.

Decisions regarding how to define teacher quality have implications for the method researchers use to measure it. For example, teaching practices are increasingly measured through classroom observation. Teacher preparation and qualifications are often measured through large-scale surveys.

Teacher Quality: How Has It Been Studied?

Just as definitions about teacher quality differ, so do the ways in which it has been studied. Conventional approaches to measuring teacher quality have typically taken four forms: (1) classroom observations of teacher practices; (2) written examinations of teachers measuring their basic literacy, subject-matter knowledge, and pedagogical skills; (3) student performance and achievement; and (4) large-scale surveys of teacher qualifications, attitudes, behaviors, and practices. It is important to note that studies of teacher qualifications or practices are not always driven by theories of what constitutes a good teacher. Sometimes such indicators are developed to answer specific policy questions. As described below, different approaches to measuring teacher qualifications or practices are based on different conceptions of what it means to be a high-quality teacher or on the specific needs or interests of policymakers.

Classroom Observation

Observational research has a long and growing history in the field of education. Classroom observation, as well as the collection of artifacts (e. g., teacher logs, homework) and information from interviews, has been employed to document teaching practices generally and to assess teaching quality specifically. Observation, as used by school systems for evaluation purposes, has been strongly

criticized as having the following problems: limited competence of principals, teacher resistance and apathy, lack of uniformity within school systems, and inadequate training of evaluators (Wise et al., 1984). Principals often experience role conflict as they try to serve as both evaluators and instructional leaders, and they tend to lack expertise in specialized subject-matter areas, especially at the secondary school level (Stodolsky, 1984).

Using observational data to document teaching practices is less controversial than using it to assess individual teachers for purposes of salary increase, tenure, or recertification. Observational studies, often combined with interviews or teacher logs, include investigations of teachers' pedagogical content knowledge and reasoning (Ball and Wilson, 1996) and the connections between education policy and teacher practices (Ball, 1990; Cohen, 1990; Peterson, 1990), professional development and teaching (Ball, 1996), and subject matter and curricular activity (Stodolsky and Grossman, 1995).

Observational data provide rich detail and in-depth information. As such, observation is typically used to provide a detailed picture of classroom instruction in a limited number of classrooms. Because collecting such data is costly, this approach is rarely used to provide a national profile of instruction. However, NCES is involved in an effort to provide such a profile. The Videotape Classroom Study, part of the Third International Mathematics and Science Study (TIMSS), consists of videotaped lessons in 231 eighth grade mathematics classrooms in the United States, Germany, and Japan. The report of the video study includes general findings regarding international differences in how lessons are structured and delivered, what kind of mathematics is presented, and the kinds of mathematical thinking in which students are engaged (U. S. Department of Education, 1998a).

Teacher Testing

Standardized tests, such as the National Teacher Examinations (NTE), have been used to measure teachers' basic knowledge and skills (e. g., basic literacy, number skills, subject-matter knowledge in particular areas). Teacher test scores have then been linked to student test scores. Ferguson (1990) found that teachers' scores on a test of basic literacy skills were significantly correlated with their students' test scores. Results are typically used to determine whether to grant temporary or permanent certification, and occasionally for continuation of tenured teachers.

While most experts agree that having basic subject knowledge is an important prerequisite to effective teaching, critics maintain that it is not a sufficient indication of the range of knowledge and skills needed to instruct and manage groups of children. They argue that this approach does not provide a complete picture of teacher quality. These tests only measure teachers' basic knowledge and not their pedagogical knowledge or their teaching practice. In response, organizations such as the Educational Testing Service (ETS), the Interstate New Teacher Assessment and Support Consortium, and the National Board for

Professional Teaching Standards have undertaken efforts to develop new systems of teacher assessment that feature "standards-based assessments." One example of the new generation of teacher examinations is the Professional Assessments for Beginning Teachers, the PRAXIS series, currently being developed by the Educational Testing Service as a replacement for NTE. The PRAXIS series consists of three types of assessments: (1) a computerized test of basic literacy and numeracy skills; (2) a paper-and-pencil test of subject-matter knowledge and general pedagogical principles; and (3) an observational assessment of classroom teaching performance. The PRAXIS series is meant to assess potential and practicing teachers at different times during their training and practice (e. g., admitting candidates into teacher education programs and awarding initial and ongoing certification). In addition, many states have developed their own assessments as a basic prerequisite for teaching. These assessments can take the form of written tests, which may measure basic skills, subject matter or knowledge of teaching methods, and performance evaluations, which could consist of portfolio evaluation or classroom observation (CCSSO, 1998).

Such efforts have grown out of the recent push to identify standards for teacher and student performance. These kinds of assessments go beyond paper-and-pencil tests to include portfolio assessment and in-person testing, which incorporate pedagogy, content knowledge, and role-play/interactive sessions. Teachers may also be required to submit examples of their work through videotapes and lesson plans. Teachers are asked to analyze teaching situations and defend teaching decisions based on knowledge of subject, students, curriculum, and pedagogy.

Student Achievement Tests

Many would argue that the bottom line of whether teachers (and schools) are effective is whether their students are successful. The use of student achievement test score gains to assess teachers, rather than educational systems, however, has received substantial criticism (U. S. Department of Education, 1996a). Specifically, social scientists have argued that it is very difficult to separate out the portion of student achievement gains that can be reliably attributed to an individual teacher. Numerous factors affect student achievement over the course of a school year in addition to his or her teacher: home background, student personality, attendance, school and community resources, and the peer group have all been demonstrated to affect how much students learn. In addition, critics have argued that standardized achievement tests assess minimum levels of student competence and are often limited to the kinds of knowledge that can be captured with multiple-choice formats.

Large-Scale Surveys

National surveys of teachers have been used to provide quantifiable indicators of teacher quality. Typically, teachers have been asked to provide information on attributes such as their educational background, major and minor fields of

study, certification, and professional development experiences. Such indicators have sometimes been linked to student test scores. For example, Ferguson (1990) found that the students of teachers with master's degrees had higher test scores in grades 1-7.

Over the years, there have been many efforts by NCES and others to use large-survey methodology to describe teaching— and, more generally, to capture what happens in classrooms. Examples of recent efforts can be found in School Policies and Practices Affecting Instruction in Mathematics (U. S. Department of Education, 1998b), America's Teachers: Profile of a Profession, 1993-1994 (U. S. Department of Education, 1997), Toward Better Teaching Professional Development in 1993-94 (U. S. Department of Education, 1998c), and What Happens in Classrooms? Elementary and Secondary School Instruction, 1994-95 (U. S. Department of Education, forthcoming). These data notwithstanding, social scientists agree that existing surveys on these topics leave room for improvement. Important work continues in areas such as curriculum content, but new tools must be developed before large-scale differences in instructional and classroom practices can be reliably reported.

The Measurement Approach

The qualities deemed relevant to effective teaching, the goals of the assessor, and the resources available all contribute to the choice of assessment. The measurement approach adopted in this report is a large-scale survey administered to a representative sample of American teachers. Such a survey is particularly appropriate for providing a national profile of teacher preparation, qualifications, professional development, and school and parental support. Providing a picture of our nation's teachers is important in tracking trends of teacher preparedness and professional experiences.

Because of constraints on teacher time and resources, there are few national reports of this kind. Instead, many national reports have compiled data from a variety of sources to make conclusions about the status of education in America. Only the Schools and Staffing Survey (SASS), conducted by NCES on a regular basis, collects data from both teachers and schools on numerous aspects of teacher quality.

SASS indicators of teacher quality include recruitment, teacher preparation, induction programs, teaching assignment (e. g., committee work, in-and out-of-field teaching), resources (e. g., class size, planning time), and professional development opportunities. However, the last SASS was conducted in 1993-94, and the next one will not be fielded until 1999-2000. The need for up-to-date, nationally representative data on the nation's teaching force prompted this Fast Response Survey on Professional Development and Training in 1998. In addition to presenting current findings on teacher quality from the 1998 FRSS survey, this report draws comparisons between the FRSS findings and findings from comparable questions on NCES' 1993-94 SASS. The comparisons provide some information about trends over the 4-year period.

1998 FRSS Survey. The Teacher Survey on Professional Development and Training was conducted through the NCES FRSS during spring 1998. FRSS is a survey system designed to collect small amounts of issue-oriented data with minimal burden on respondents and within a relatively short timeframe. Questionnaires were mailed to a nationally representative sample of 4,049 full-time teachers in regular public elementary, middle, and high schools in the 50 states and the District of Columbia. The sample was designed to represent full-time public school teachers in grades 1 through 12 whose main teaching assignment was in English/language arts, social studies/social sciences, foreign language, mathematics, or science, or who taught a self-contained classroom. Part-time, itinerant, and substitute teachers were excluded, as were teachers whose main teaching assignment was in another subject area (e. g., art, special education). Data have been weighted to national estimates. All comparative statements made in this report have been tested for statistical significance using chi-square tests or t-tests adjusted for multiple comparisons using the Bonferroni adjustment and are significant at the 0.05 level or better.

1993-94 Schools and Staffing Survey. Since 1987-88, NCES has periodically conducted the SASS, an integrated survey of public and private schools, school districts, principals, and teachers. Most recently conducted in 1993-94, it provides a comprehensive picture of the school workforce and teacher supply and demand. Included on the public school teacher survey are several items on teacher training and professional development. Some of the items are similar, although not identical, to the items on the FRSS survey. Data from the similar items on the 1993-94 SASS teacher survey were reanalyzed for a subset of schools and teachers that are approximately the same as the schools and teachers sampled for the FRSS survey. Results are incorporated into the discussion of the FRSS data where appropriate. Because the SASS data were reanalyzed in this way, the estimates that appear in this report differ from SASS data published in other National Center for Education Statistics reports.

Organization

The preparation of high-quality teachers stems from the many experiences and opportunities that they face, both prior to and during their teaching careers. For all teachers, learning begins before entering their own classrooms. Among their learning experiences is the formal postsecondary training they undergo in order to become educators. This includes college work and certification. Once on the job, teachers have many additional opportunities to learn— ranging from the general learning that comes from years of work experience to more structured opportunities in the form of formal professional development activities. Not surprisingly, teacher learning and preparation are enhanced in environments that support their learning and their work. This discussion suggests one useful model for thinking about teacher quality; it begins with different types of teacher learning and ends with the support teachers receive to pursue continued learning.

2

Technical Teachers Training

Even though often less acknowledged, the importance of a good teacher is enormous in India. They play a vital role in the overall development of the students. Not only are they responsible for imparting academic knowledge, but are also responsible for inculcating the right values and principles to their students. The importance of teachers is especially enormous during the formative years of children when they first join school. Therefore it is very important to have professionally qualified teachers to ensure the right development of students. At present there are several colleges and institutes offering Teacher's Training Courses in India. Since the needs of the primary students are different from the secondary students, the primary teachers and secondary teachers are required to take up different teacher's training courses.

Therefore there are different teacher's training institutes offering:

- Basic training certificate (BTC)
- Junior basic training (JBT)
- Nursery Teacher's Training (NTT)
- Diploma in Education (D.Ed),
- Primary teachers training (PTT),
- Bachelor in Education (B.Ed)
- Other teachers's training courses.

BASIC TRAINING CERTIFICATE (BTC)

The quality of the education system plays a major role in the development of the country as it builds up the human resource of the future. But the sustenance of a vibrant educational system depends to a large extent on the quality of

teaching at the elementary level. In order to improve the quality of the teachers, the government of India has set up various institutes that provide Basic Training Certificate (BTC) after the successful completion of a course in teacher's training. The institutes providing Basic Training Certificate (BTC) courses are set up in almost all the states in India so that maximum number of teachers can avail the training and help improve the quality of education in India. The basic training certificate courses in the field of education are increasingly becoming popular as recruitment boards of primary teachers in various Indian states regard the BTC as a part of the minimum eligibility criteria for appointment of primary teachers.

There are several institutes that offer Basic Training Certificate (BTC) Courses in India for teaching at the elementary stage. On completion of the Basic Training Certificate (BTC) Courses from an institute in India, one can apply to various primary schools.

JUNIOR BASIC TRAINING IN EDUCATION

The concept of JBT-Junior Basic training in India is a result of the realization that education received at the elementary level shapes the human personality in more ways than one. It is therefore in the interest of the students that they be taught by trained teachers who can develop the cognitive skills and also take care of the emotional needs of the students. The junior basic training Institutes (JBT) have come up in India mainly to train the teachers who are actively engaged in imparting education to the tender aged children.

JUNIOR BASIC TRAINING IN INDIA

In some of the states in India the JBT or Junior Basic Training course is conducted for a period of two years. Entrance test is also conducted for the admission of students to this course. Apart from the government institutes there are quite a number of private institutes that conduct junior basic training courses in India. A certain number of seats are also kept reserved as per the rules and regulations mentioned by the government.

Students who have passed their 12th standard board examination or equivalent are eligible for taking admission in this course. In some of the states in India a minimum percentage of 50% marks in 10+2 examination is essential for the students willing to join this course. Candidates with a bachelor's degree seeking admission to this course should have a minimum percentage of 45% marks. Candidates should be between seventeen to twenty eight years of age. Five years maximum relaxation in the upper age limit is given to the reserved category candidates.

JUNIOR TEACHER'S TRAINING CERTIFICATE COURSES

As schools bring together students from different sections of the society, training of teachers is very important so that they can take care of the differential needs of the students. Junior teacher's training certificate courses are designed

to impart training to the teachers so that they can make the students confident enough to face the challenges of the future. Teachers trained through JTTC are expected to be actively engaged in the whole process of producing enlightened citizens of the country.

ELEMENTARY TEACHER EDUCATION (ETE)

Elementary Education refers to the education imparted to children between the age group of 4 to 14 years. The education system in India is supposed to be the second largest and well-developed after America but in the rural areas, the number of drop-outs at the elementary level is quite high.

The government, however, is taking steps to enhance the scenario and has been creating programs that would make education easily accessible to everyone and also ensure that they continue with higher education. In order to strengthen elementary education in India it is also essential to provide proper training to the teachers entrusted with the duty of educating the students. There are quite a number of institutes that conduct elementary teacher education (ETE) in India.

Elementary level education lays the foundation of learning in a child. It is, thus, very important that teachers acquire proper training in order to handle children at the elementary level. The course includes all the major aspects of the field of study. Apart from the theory part, teachers also go through practical training courses. However, candidates willing to pursue an elementary teacher education course in India need to fulfil the admission criteria as mentioned by the respective institutes. Candidates who have qualified their 10+2 examination or equivalent from a recognized board with the minimum percentage of marks are eligible for admission to this course. The growing need for trained teachers for the proper functioning of the schools have compelled private institutions to start various courses in elementary teacher education in India.

PRIMARY TEACHER'S TRAINING (PTT)

Well-trained teachers are capable of improving not only the quality of education in India but also the quality of life as they are actively engaged in building the human resource of the future. Primary Teacher's training is even more important as elementary education plays a very important role in a person's life. As they need to take care of the emotional needs along with developing the cognitive skills of the students primary Teacher's training is regarded as essential. Because of theses reasons Primary Teacher's training (PTT) is made compulsory in various states for appointment as primary teachers.

On this page we have tried to cover the institutes in India that offer the Primary Teacher's Training (PTT) courses.

We have tried to provide as accurate information as possible while compiling this list of PTT institutes in India. However, if you come across any discrepancy or error, do write to us about it. We would welcome any kind of feedback that will improve the quality of this page-a page that concentrates on providing the best information on PTT institutes in India.

DIPLOMA IN EDUCATION

As elementary education plays a very important role in a person's life and also in the development of the nation, the need to train the teachers is increasingly been realized. In India there are different institutes that provide Diploma in Education, D.Ed.

This diploma in education would help the teachers in developing their cognitive skills and also in taking care of the psychological needs of the students.

The D.Ed-Diploma in Education, India is gaining popularity as various states have made it compulsory to have D.Ed to be eligible for appointment as teachers.

Many institutions offering D.Ed-Diploma in Education in India Teacher training in India is offered through a number of institutions across the country.

The various institutions offering D.Ed-Diploma in Education, India include the following:

- Adarsh Junior College of Education, Maharashtra
- Adhyapak Vidyalaya, Junior College of Education, Mumbai
- Basic Training Institute, Raipur, Madhya Pradesh
- District Institute of Education & Training, Ambala, Haryana
- Hindu College Of Education, Haryana
- Padmashree Academy for Creative Teaching, Bangalore.

Qualification: For admissions to the D.Ed-Diploma in Education at various institutes in India, the minimum qualification required is completion of 12 years of basic education. Also 50% is the minimum marks required in the qualifying examination to be eligible for Diploma in Education.

BACHELOR OF EDUCATION, B.ED

Teachers play a very important role in a student's life. It is, to a great extent, the teachers who decide the shape a student's life will take. So, it is very necessary to be adequately equipped with resources that will make the teacher a perfect role model to the students. To achieve this, Bachelor of Education or B. Ed was introduced, which will teach a person about teaching and the various aspects associated with teaching.

Once a person completes the Bachelor of Education (B. Ed) coaching or training, then he is awarded with a B. Ed degree. There are some important reasons as to why one should opt for B. Ed course. After training one becomes efficient in teaching subjects of his specialization on the basis of accepted principles of learning and teaching.

The course develops skills and widens understanding so that one can impart quality education to his students. The course also teaches about the attitude and makes him skilled in coming up with innovative teaching techniques. One becomes more competent in understanding psychological principles of growth and development and individual differences of the students he teaches.

There is a separate section in this course where the candidate learns to guide the children and counsel them in solving their personal and academic problems.

Top B.Ed colleges in India: If anyone is willing to have a strong foundation of teaching, it is always prudent to seek admission in some of the reputed B. Ed colleges in India.

Among them are:

- Jamia Millia Islamia, Maulana Mohammed Ali Jauhar Marg, New Delhi
- A.G. Teachers College, Ahmedabad
- Himachal Pradesh University, Department Of Education, Shimla
- D.M.College of Teacher Education, Imphal
- Andhra University, Visakhapatnam
- University of Bombay
- St. Xaviers College of Education, Patna
- College Of Teacher Education, Kozhikode
- NSS Training College, Pandalam.

Indian Universities offering B.Ed course Correspondence courses: Besides the above mentioned colleges, there are some universities which offer integrated course on Bachelor of Education.

- Annamalai University
- Bangalore University
- Jamia Millia Islamia Institure of Post Graduate Studies and Research
- University of Kerala, Institute of Distance Education
- University of Madras
- Maharishi Dayananad University
- Mother Teresa Women's University
- Patna University
- SNDT Women's University.

The demand for qualified and trained teachers all over the country has made the students choose B. Ed to ensure a good teaching job.

M.ED (MASTER OF EDUCATION)

As the education sector is attracting adequate attention in the age of structural adjustment and economic reform, Master of education (M.Ed.) is increasingly becoming a preferred career course for many Indians. This has also helped in the growth of the M.Ed. Career Colleges in India. The M.Ed Courses in India are generally pursued after the successful completion of the Bachelor of Education (http://www.indiaedu.com/b-ed-colleges/index.html) (B.Ed.) courses. It is a Post Graduate degree course offered at most of the District Institute of Education & Training (DIET) centers across India. In India M.Ed (Master of Education) is mainly offered by institutions that are recognized by National Council of Teacher Education, New Delhi.

It is a government body in charge of improving and implementing teacher education programmes in the country. It is essential to pursue the M.Ed. courses if you are interested in pursing a teaching career. M.Ed. is considered an important course as it helps the students to learn the education systems and patterns more profoundly and comparatively. In every state in India there are

several institutions that offer Master of Education courses. The eligibility criterion for admission to this course is that candidates must pass their Bachelor of Education B.ED from a reputed institution in India.

TECHNICAL TEACHERS' TRAINING INSTITUTE (TTTI)

Technical Teachers' Training Institute, Chennai is a resource institute established by the Government of India for quality improvement of technical education in our country and in the Southern region in particular.

Technical Teachers' Training Institute, Chennai is a model human resource development Institute for planning, designing, developing, organizing and evaluating quality training programmes, research studies and learning packages for technical and vocational education, industry and community. The Institute strives continuously and vigorously to further enhance its sensitivity to environmental changes and reach greater heights of excellence through active collaboration with national and international agencies on Projects and Programmes aimed at quality improvement of technical education systems.

ABOUT TTTI

The Technical Teachers' Training Institute (TTTI), Chennai, was established in 1964 by the Government of India as a key catalyst institution for ensuring quality in technician education in South India comprising the states of Andhra Pradesh, Karnataka, Kerala and Tamilnadu and the Union territory of Pondicherry. The mandate of the Institute is to take initiatives to offer need based HRD programmes through appropriate modes and develop curricula and instructional resources. It will also foster research and offer consultancy and extension services for the total development of polytechnics and other technical and vocational institutions, the Directorates managing these institutions, business, industry and service sectors and the community at large. In carrying out these, the Institute will collaborate with national and international agencies interested in and/or deriving benefits from technical and vocational education including business, industry and service sectors. TTTI, Chennai an autonomous organisation has made substantial and significant contribution towards improving the quality of technical education in all its aspects.

Though during the initial stages the emphasis was on training of teachers, over the years the emphasis has gradually changed to assisting the state governments and the polytechnics in the region towards improving their education process and products. This has led to diversification of the Institute's activities to suit the requirements of the clientele system.

STUDIES IN INNOVATIVE TEACHER TRAINING PRACTICES

Most of the studies in this category are impact studies as these ascribed the change in product variables to the ongoing teacher-education programme. They

investigated the product variables when the student-teachers entered the existing system and later when they were just about to leave the college. Mehta (1985) and Pillai (1985) studied the impact with respect to change in attitude towards teaching, motivating factor for choosing teaching, and change in values.

Banga (1983) studied the impact of a teacher-training programme in physical education on physical fitness, personality characteristics, adjustment and maturity of student teachers. Kudesia (1986) studied the effect of a technical teachers training programme on teaching skills. All these researches concluded that a change in student-teachers' behaviour took place because of training. In a similar context, some researchers compared trained and untrained teachers on various product variables and found trained teachers different from their untrained counterparts. Bhide (1987) compared them on self-concept. Researchers like Das (1979) went a step further and compared trained and untrained teachers of primary level on their ability to solve the problem of wastage and stagnation. However, results revealed that training of teachers did not contribute to checking wastage and stagnation.

Some researchers compared the products of two different operational schemes of teacher education. Singh (1985) compared teaching competence, role performance, and attitude towards teaching of teachers trained through a one-year B.Ed. course and a four-year integrated teacher-education course run in the regional colleges of education. The teachers of the two courses were not found to be different. Gogate (1983) went a step further and studied the effect of a training programme not only on teachers but also on teacher education and extension education workers. The training programme was organized for the education of socially and economically backward children. A change was found in the awareness of the subjects involved in the training programme about the methods of teaching required for the target group. However, a close look at all these studies shows that the impact of present teacher-education programmes has been investigated only at the peripheral level. A deeper analysis is needed so as to study the impact of training at social, economic and cultural levels, The researchers need to study the impact of training with respect to teachers' contribution to society as a factor of social and cultural change.

STUDIES IN INNOVATIVE TEACHER TRAINING PRACTICES

The second set of studies used some innovations in operational teacher education programmes. The innovations used had. been concerned with various aspects of teacher-education programmes. Researchers like Bhatt (1966) studied the effect of the Kapason training scheme where student-teachers, apart from usual practice teaching and theory, were also trained in organizing creative activities in arts and craft. The training was found to be effective. Adinarayan (1983) trained student-teachers in stating objectives, analysis of the context and techniques of evaluation. The experimental group was found to be better on inquiry and investigatory skills. All such studies introduced specific innovations in the operational teacher-education programme and investigated

its effectiveness. There are other studies that used innovations concerned with the theory or practice teaching part of the teacher-education programme. The innovations in the theory part had been development and use of self-learning material and the use of mass media, whereas in the case of practice teaching part, the innovations were behaviour modification techniques, microteaching and training in models of teaching. Most of these studies are experimental in nature and employ experimental design as per their objectives to judge the effectiveness of the innovations with respect to teaching competence.

(i) *Studies in Use of Learning Material:* The innovations of teaching through instructional strategies motivated researchers to develop self-learning material and study its effectiveness in the field of teacher education also. Sangaun (1984) developed programmed learning material, Jayalakshmi (1985) developed instructional material and Bhatt (1982) developed software material to be presented in simulation or programmed learning style. All of them took up the subject of educational psychology for developing instructional material. They studied the effectiveness of the material with respect to trainees' achievement and attitude at different levels of sex, SES, intelligence and English reading comprehension. Lambhate (1987) developed instructional material for teachers teaching science with relevant rural aids, graphics and models. These studies made use of the Skinnerian approach for the development of instructional material. Researchers like Sheth (1984) developed a self-instructional multimedia package for developing teaching skills among teachers. Some researchers went a step further and developed instructional material for remediation of deficiencies. Swamy, N. (1984) developed a diagnostic test and learning material for remediation of deficiencies in secondary school physics for student-teachers. Mukherjee (1983) identified reading disabilities of teachers in English language and developed remedial self-instructional material for the same. Researchers like Datar (1984) developed question banks in educational psychology. However, there is a need to develop self-instructional material in structured form from the different theory papers of teacher-education programmes. Researchers also need to develop instructional material for remediation of deficiencies in language, sciences and social sciences for teachers/ student-teachers especially at primary level, the reason being that, at primary level, the teachers are less educated and require more subject clarity.

(ii) *Studies in Use of Mass Media:* With the advent of television and radio programmes in India and the stress of national bodies like the UGC and NCERT on the use of television in teacher-education programmes, researchers have been tempted to make studies in this direction. Mohanty et al., (1976) surveyed the reaction of teachers to educational TV programmes for in-service primary teachers. In yet another study, the

same researchers assessed the popularity of radio programmes among the participants in an in-service teacher education programmes. These studies were primarily conducted with the objective of providing feedback to the media managers for their teacher education programme. Now, when there is increased use of media like television and radio in education in India, it is desirable that studies be conducted in different regions of the country to evaluate television and radio programmes in teacher education. The researchers also need to plan studies to assess the improvement in teaching competency of teachers because of use of mass media in teacher-education programmes.

(iii) *Studies in Microteaching:* In practice teaching, one of the innovations that has attracted the attention of researchers is microteaching. The research in this field in the beginning aimed mainly at finding out effectiveness of microteaching with respect to improvement in teaching competence. But after its effectiveness was established and it was made a part of teacher-education programmes in many universities in India, the researchers conducted studies in improvement in components of various teaching skills, strategies for integration of different teaching skills, effect of different types of feedback and sources of feedback, development of multimedia packages for training in teaching skills. Such a trend in research studies is helpful in adopting the innovations in different sets of conditions.

There are 49 studies in all in the field of microteaching out of which 22 are reported in this survey. Yogendrakumar et al. (1980), Naik (1984) and Thakkar (1985) went in for establishing effectiveness of microteaching with respect to improvement in teaching competence of student teachers. Researchers like Sharma (1980), Lalitha (1981), Sharma (1982), Bawa (1984), Bhatia (1984), Chathley (1984), Dave (1987), and Ekbote (1987), studied the effect of different strategies of integration of skills on teaching competence of student teachers. It can be concluded from their findings that planned integration of skills is helpful in improving teaching competence. Some researchers compared various strategies of feedback used during the process of microteaching. Syag (1983) and Prabhune et al. (1984) compared three strategies of feedback, viz., self (audio-feedback), peer and supervi-sory feedback. They found peer-feedback to be most effective in improving competence in teaching skills. One feature common to all these researches is that they use teaching competence as a criterion to measure attainment of skills. But these studies are unable to answer the question, 'What minimum level of competence needs to be achieved when a teaching skill is said to be attained?' In this direction, Joshi (1984) made a venture and developed a performance criteria for testing efficacy of student-teachers in attaining teaching skills. Further, product variables considered in the studies were not only general teaching competence but also pupil attainment, pupil

liking, peer assessment, headmaster's perception, attitude of student-teachers and teacher educators towards microteaching (Sidhu, 1983; Khan, 1985; Kalyanpurkar, 1986; and Oak, 1986).

Almost all these studies are experimental and employed pretest, post-test control group design. Among these, Sidhu (1983) and Syag (1983) went a step ahead and conducted longitudinal studies. They studied the carry-over effect of microteaching on different product variables just after training, six months after training and two years after training. They came out with the conclusion that microteaching training retained its effect over time. More studies of this kind are required to arrive at generalizations. Further studies in microteaching are required to specify skills that are required for teaching different subjects at different levels, viz., 'elementary, secondary and higher education. In this direction, Pratap (1982) made a venture and studied skills required for teaching modem mathematics at secondary level. More studies in this direction will help for planning the teaching of different subjects.

The researches done in the field of microteaching are still at a preliminary stage. More imaginative and analytical studies are required so as to answer various questions like 'What specific skills are required for teaching different subjects? How many microteaching cycles are required to attain competence? What exactly should be the length of a lesson plan? What are the skill-relevant behavioural changes that take place during attainment of skill?' Apart from finding answers to these questions, the researchers need to study the microteaching skills with respect to their proportion being used in the classroom rather than limiting themselves to a few most used skills in the classroom.

(iv) *Studies in Techniques of Behaviour Modification:* Still another training system that stresses specification of behavioural objectives, reinforcement of desired behaviours and rapid feedback of the effects of such reinforcement is the system of teacher behaviour modification. In this volume there is a separate chapter on teacher behaviour but in the present chapter only those studies have been considered that are connected with training of teachers in modification of their classroom behaviour. Shukla (1985) studied the effect of transaction training on different indices of teaching. Bhalwankar (1984) developed a scale suited to the Indian set-up for observing and training teachers in classroom behaviour indices. Dogra (1986) studied the effect of the content analysis system of classroom communication behaviour pattern. Gupta (1983) studied the effect of training in behaviour modification in simulation. The intent of these studies was to get teachers maximize the frequency of such indices that affected the pattern of learning in the pupils. They tested the proposition that using a particular system of recording teacher behaviour, and feeding the same back to the teachers, will get them to engage in more and more desired behaviour towards their pupils. The studies

reported in this survey are a step in advance of those reported in previous surveys as these did not simply use the Flanders Interaction Analysis System to observe and train teachers/student-teachers interaction analysis; rather, they used interaction categories united to the subject taught by the teacher. But the question that remains still unanswered is, 'How can the behaviour of the teacher be modified through training be maintained over a long period of time? 'The researchers need to conduct studies in this direction so as to establish the lasting limits of learnt behaviour in teachers.

(v) *Studies in Training in Teaching Models:* The standard training models used in teacher education have been classroom interaction analysis and microteaching. These models are predominantly behaviouristic in nature. These have been used as training models, irrespective of the subject being taught and objective being achieved. However, the researchers have started trying out several alternative models for training in teaching of information, social interaction, behaviour modification, personal abilities, etc. Such a system of training includes elements like theoretical orientation, observation and demonstration, peer practice and feedback, and coaching in a real classroom situation. Passi et al. (1986) took up a study at the national level with a view to establishing the effect of these four elements on teaching competence in one particular model of teaching. In a similar study, Passi et al. (1986) studied the effect of training in models of teaching on the competence of student-teachers and their willingness to use the same in their classrooms. It was found that training had a positive effect on the product variables of competence and willingness. Such studies represent a welcome trend in two ways. One is that they are a departure from a purely behaviouristic orientation in teacher education, and secondly they help in recognizing the fact that there are different models of teacher education with respect to different aspects of teaching.

Studies in training of teachers in models of teaching need to be designed to find out how far training in particular teaching model improves the conceptual level of the trainees, their teaching style, adoption of various skills and transfer and reutilization of the same in different situations.

The researchers need to find out specifically the number of demonstrations, practice sessions and coaching exposures that would help the student-teacher master a particular teaching model. Further studies also need to be done with respect to methods and types of feedback that could bring the desired level of competence in a student-teacher within minimum exposure time.

TRAINING IN TEACHING MODELS

A cursory look at the number of researches conducted in the last three decades reveals that more and more studies are being conducted in the area of teacher education.

The quantitative leap, however, cannot be taken to imply that the area is being exhaustively explored; rather it is difficult to claim that the researchers took cognisance of the gaps pointed out in the trend reports of the earlier surveys. Lack of coordination and planned effort on the part of researchers has made the gaps more conspicuous.

Further, the emphasis given to teacher education programmes in the National Education Policy (1986) has opened new avenues of research in the field. This section of the report is devoted to pinpointing some of such needed research efforts. The observed trend of researches in teacher education has made it quite clear that researchers viewed teacher education from a narrow angle. They studied teacher education in relation to isolated aspects of the total process.

They hardly went in for relating policies and practices of teacher education. After all, teacher education cannot be considered in isolation from its national and social obligations. A large number of commissions and committees on education enumerated goals for teacher education in different sets of circumstances. But researchers rarely went in for finding out how far these goals have been realized.

They, rather, confined their studies to assessing the functioning of single institutions with respect to the achievement of a small group of students. It is urgently necessary that the gaps between functionality and set targets should be pointed out. This will help in planning teacher education programmes for the desired role of the teacher in the new social order. Now that the National Education Policy (1986) has laid special emphasis on education of teachers and detailed out the role of the teacher in guiding students, building their character, promoting innovation, etc., it has become obligatory on the part of researchers to provide empirical evidence of how far existing teacher education is helpful in promoting such ideals.

If the researches are seen from the framework of categories given in the trend report, one finds that presage-product studies are lacking. Researchers did study teacher effectiveness from the point of view of teacher characteristics, or teacher behaviour and its impact on the achievement of students. But similar studies have not been forthcoming of cases where the teacher educator's characteristics or his classroom behaviour have been studied with respect to student-teachers' attainment in theory of teaching skills. There is a need to train the teacher-educator for training student-teachers.

Further studies need to be undertaken where contextpresage-process-product variables are taken into account. Such studies will help in providing a gestaltic view of the teacher-education programme and answer questions like, 'What kind of teachers' using what kind of procedures, most effectively foster healthy mental and behavioural skills in different kinds of children who differ in their background, needs and aspirations? What type of institutions, with what kind of teacher-educators, and following what type of teacher training programmes, promote the desired competency level among student-teachers of a particular background? Further studies made in institutional climates affect student-teachers' and teacher-educators' performance.

However, no study has systematically related this factor to the nature and quality of instruction. Only occasionally have studies explored the significance of student-teachers' and teacher-educators' traits in influencing learning, even though these may account for much of the unexplained variance in achievement. Much more needs to be discovered about how teacher educators personal traits influence their teaching in the classroom and student-teachers' competence and satisfaction in learning. The complex interaction of institutional environment, personal traits of teacher educators and student-teachers, instructional methods, and supervisory methods employed and instructional outcomes is a most needed area of research.

The trend of process-product studies reveals that there has been systematization of instruction and a large coverage of objectives of teacher education. In their quest for making instruction more systematic, some researchers developed instructional strategies. Not only did they develop instructional strategies but they also, made attempts to select the best strategy among alternative strategies.

Further, researches in interaction analysis provided to student-teachers an experience in objective evaluation of the lessons they observed and helped them in understanding the dynamics of classroom teaching. On the other hand, microteaching studies have been aiming at development of teaching skills in student-teachers. Simulated studies were incorporated for the development of application and decision-making abilities.

Above all, the studies in training of student-teachers in alternative models have enhanced the chances of getting rid of outdated approaches in practice teaching programmes. The teaching for training in models such as Concept Attainment, Inquiry Training, Advance Organizer Model, etc., has helped in recognizing the fact that there should be different models for teacher education, depending upon the context of the teacher education programme. All this shows that researchers in teacher education have been following a trend of larger and comprehensive coverage of objectives.

This is a welcome trend, but the severe criticism that is levelled against this type of studies is that they have made teacher education simply a mechanical process, rather than a process implying training, of a humane teacher. There is some substance in this criticism, insofar as there may be a lot of risk inherent in this kind of highly specified skill training. After all, the teacher's function is not limited to the four walls of the classroom. He is emotionally attached to the learner as well as the subject he teaches. Because of this attachment and the skills required, he develops an individual 'Style of Teaching'. Researchers must direct their studies towards probing such styles of teaching and communication abilities which may differ from subject to subject and situation to situation in different teachers.

While viewing studies from a methodological point of view, it can be said that researchers have not generally interpreted their studies in terms of implications; they have not made explicit what their findings imply and how

they should be used. What is needed in research is that one not only describes the characteristics of teachers and student-teachers of institutions, but also tests strategies for improvement of teacher education with respect to planning and functioning of the system. Empirical evidence is required to identify the gap between the type of student-teachers that enter the portals of teacher-education institution and the requirements of the existing education in the institution; the changes in the teacher-education programme that can be easily made at micro and macro levels so that it is conducive to the society in general and the teaching community in particular.

The trend research work done in the area of curriculum context reveals that this has been one of the most neglected areas in teacher education. The work that has been done is haphazard and ill-conceived, unconnected with the real problems of teacher education. The major problem that has been troubling the educationists is the weightage to be fixed for different theory and practical aspects of courses at B.Ed. level. Educationists have chalked out a programme in the form of 'Curriculum Framework' and fixed a particular system of weightage for the different aspects, but all this they did on the basis of their thinking and experience, in the absence of empirical research data.

Such a framework may not provide for a particular aspect of the teacher education course that will help student-teachers to acquire a certain degree of competence to deal with pupils of different ages and abilities. Many problems of this nature need to be addressed to make the curriculum relevance-based. The measure of good teaching still remains complex and unclear. The development of teaching theories remains in its infancy. Even after four surveys, teaching theory in the Indian context has not been thought out. Of course, this may be partially because of definition, design and instrumentation. Another plausible reason that one infers from the researches done in teacher education so far is that teacher effectiveness has perhaps been considered in the abstract, without reference to the particular subject content involved. As more knowledge is gained about the structure of an individual discipline, both teaching methods and methods of evaluating their effectiveness can be found.

Researchers, therefore, need to plan their studies so as to answer the questions, 'What are the conditions under which one learns to learn and how can students be helped to develop attitudes, habits and skills conducive to life-long learning?' Answers to questions like these will help in pursuing the proposed objective in the National Education Policy about 'Accountability of Teachers' to the society in general and the profession in particular. But this does not mean that teacher accountability is solely dependent upon his ability to effect desired changes in learners. This, in fact, raises further questions for researchers: 'What factors help the teacher to become an object of student respect and a source of positive personal influence on the formation of students' intellective values and attitudes? What factors promote social organisational conditions conducive to a teacher's smooth functioning with his peers, head and management authorities?' These questions demand attention.

Changes in society and world over have made it necessary that teacher education be looked at not only from the angle of teacher-student interaction but also from social and psychological perspectives. In other words, teacher-education institutions need to prepare teachers for their social obligations. It is essential that researchers probe into the role of the teacher outside the classroom and related factors. There is need to know more about the teacher's role expectations, the relationship between the individual teacher's role expectation and the social responsibilities of the teacher; the relationship between the teacher's concept of his role and his performance as observed by other members of the society. Such knowledge will help in developing new models of teacher education and trying them for training teachers of the new social order.

The National Education Policy has stressed strong, unified and responsible teachers' associations to protect the dignity and rights of teachers. The role of such teachers' associations, as envisaged by the NEP, is to develop awareness among teachers of their professional growth and development.

It entails upon researchers to probe issues concerned with the linkage between the institutional decision structure and the degree of participation by teachers; the educational impact of involving teachers in decision-making; the type of activities in which teachers must participate in order to influence policy; the linkage between teachers' policy-influencing activity and their satisfaction with their working conditions. Research into such questions would help to analyse the relationship between academic governance and policy making.

A problem that is yet to draw the attention of researchers is correspondence education-in the field of teacher preparation. It has been steadily expanding with far greater remote control systems than prevailed a few years ago. Some of the institutions and centres have national networks and it is open to graduates working in different establishments.

The products of this system can hardly be distinguished in terms of degree requirements, but certainly they have undergone an entirely different kind of exposure to teacher preparation. It is necessary that researchers probe the qualitative differences in the products of the two systems and advise the universities and the government to adopt such systems as are qualitatively strong and have lower unit cost.

With the advent of the Navodaya Vidyalayas and the Academic Staff College, in-service education of teachers has become a continuous programme. For a very practical reason, it can be provided most widely by an inflow of enriched material into the educational institutions in the form of teachers' handbooks in different context areas. It will help teachers in self-learning as well as give them the freedom to seek guidance from time to time, at their convenience. Such handbooks are equally desired for pre-service education of teachers.

After all, future teachers will be able to make their pupils independent in learning in everyday life only if they themselves enjoyed the same independence during their training. Researchers must take up studies in this field and develop material for education of the teachers of different disciplines and different levels of education.

Changes in society have made it all the more necessary to have provision for separate institutions for students of specific age-groups and abilities. The institutions of non-formal education, for exceptional children, adult learners, etc. have to be different from those for general and formal education.

For such institutions, specialized teachers are needed and provision has to be made to prepare such teachers to deal with special types of learners. The general teacher-education admission procedure, curriculum, evaluation process, practical work, etc. cannot cover everything in these courses. In this context, it is necessary that researchers identify problems and needs of teachers of such courses so as to advise the functionaries and managers concerning the organisation of specialized teacher-education programmes.

The provision for socially useful productive work and community services in teacher-education programmes has been thought ideal for developing skills and values among student teachers. But such courses have simply become rituals for passing the examination.

The responsibility for this lies also with researchers who had not planned their studies to find out training as well as evaluation procedures for such value-oriented tasks. It is necessary that researchers should conduct studies in this direction and help planners chalk out programmes of community work so that they become an integral part of teacher education. In the end, it can be said that there is need for more comprehensive and sophisticated research and better dissemination of results so that these can be used later on, for the improvement of teacher-education programme within the framework of the total educational system in the country. The study was confined to 72 higher secondary schools located in seven major cities of Rajasthan. Initially 205 science teachers with a minimum experience of three years were selected. The student sample consisted of 3450 science students. In order to measure.

PERSPECTIVE AND RECRUITMENT OF TEACHER EDUCATION

Initial teacher education throughout the world has five main features, all representing decisions regarding key issues. These are: recruitment, curriculum, structure, governance, and accreditation and standards.

RECRUITMENT

Among the most important features of teacher education are the criteria and procedures by which candidates are selected or recruited for entry to programs and institutions. Unlike some other professions, teaching often suffers from a shortage of qualified candidates for admission. Therefore, teaching often does not enjoy the privilege of being able to select the best qualified from among a large pool of applicants. The problem for a system is, first, ensuring that there is a large enough pool of qualified graduates to meet the needs of the professions and, second, attracting enough qualified applicants to enter teaching in competition with the other professions.

How much schooling should a candidate for admission to teacher education have? How valuable are experiences outside school for prospective teachers? If the demand for fully qualified applicants for admission to teacher education programs is greater than the supply, are there alternative qualifications that might satisfy the demand? These are some of the issues confronted in attempts made to recruit candidates for entry to teaching. Factors influencing recruitment include the status of the teaching profession; the supply of, and demand for, teachers; and the economic resources of the system.

An example of the status of the profession affecting recruitment can be seen in Thailand. In 1996 it was reported that the low status of the teaching profession in Thailand was discouraging competent people from entering teaching and that some entrants were not seriously committed to becoming teachers. For Thailand, therefore, the need to improve the status of teaching and to provide other incentives for joining the profession was important.

Raymond Bolam pointed out that the career structure of the profession is also influential, contrasting the situation in the United Kingdom, where a head teacher might earn four times as much as a beginning teacher, with the situation in Spain, where head teachers received only a small increase in salary above that of their colleagues. Presumably, in Spain, candidates motivated by prospects of economic advancement are less likely to enter teaching than they are in the United Kingdom, other things being equal.

Another important aspect of recruitment concerns the number of years of schooling candidates have completed before entry to training institutions. While in most developed countries completion of a full eleven or twelve years of schooling is a normal requirement, that is an unrealistic expectation in a country that is unable to produce a sufficient number of such graduates to meet its needs for teachers.

Toward the end of the twentieth century, in the central and south Asian countries of Afghanistan, Pakistan, India, Sri Lanka, Bangladesh, and Nepal, the mean number of years of schooling required before entry to teacher training was 10.7 years.

In the southeast Asian countries of Thailand, Malaysia, Singapore, Indonesia, and the Philippines, it was 10.5 years, while in the Latin American countries of Brazil, Chile, Cuba, Peru, Venezuela, and Colombia, it was 9.3 years. In the African countries of Algeria, Ghana, Nigeria, Ivory Coast, Morocco, and Kenya, the mean was 9.6 years.

This is not to say that the only qualifications accepted for entry to teacher education are the number of years of schooling or level of academic achievement. In some countries, candidates are recruited without completing the full secondary education available because of their valuable experience in other types of activities beyond formal schooling, such as employment and community development work, and their strong motivation to become teachers. In Australia, for example, universities like the University of Sydney offer such candidates programs specially designed to take advantage of their strengths.

Curriculum

What do student teachers need to learn in order to become effective teachers in the contexts in which they will be employed? That is the most fundamental of all the questions that can be asked about teacher education. Initial teacher education programs usually have five strands: general education, specialist subjects, education foundation studies, professional studies, and the practicum, including practice teaching.

General education programs attempt to ensure that intending teachers have a sound grounding in the predominant knowledge, attitudes, and values of the cultures in which they are preparing to teach. General studies in history, the arts, science, mathematics, philosophy, ethics, government, psychology, and sociology are common components of this strand.

Specialist subjects involve studies in depth, which qualify students to teach specific areas of knowledge. Literature and literacy, languages, history, geography, mathematics, science, computing, domestic science, physical education, and industrial arts are examples. Student teachers preparing to teach in elementary schools are usually expected to teach a broader range of content, whereas post elementary teachers are usually more specialized.

Education foundation studies include studies of the history of educational thought, principles of learning and teaching, human growth and development, comparative education, and sociology of education. Curriculum and instruction subjects provide units on principles and practice of planning, delivering and assessing learning experiences for students and include such matters as programming, classroom management skills, test construction, individualizing instruction, small group teaching methods, laboratory instruction, and cooperative learning techniques.

In some systems, the distinction between these theoretical and applied learnings is eschewed on the grounds that theoretical studies have little relevance to newcomers unless they are seen to arise from practice, and attempts are made to integrate the two. This was well exemplified in England in 1992, when, partly on the grounds that the content of teacher education was too theoretical, Kenneth Clarke, then the Secretary of State for Education, announced that 80 percent of programs in secondary teacher education should be "school-based." In North America, Bruce Joyce and Beverly Showers, among others, called for a more central role of the school in teacher education. A somewhat similar complaint about the excess of theory in the curriculum of teacher education programs was reported in 1991 by Andrea B. Rugh and colleagues with reference to Pakistan, and in 1986 by Linda A. Dove regarding Papua New Guinea.

In some parts of the world, the role of the teacher is wider than in others and the curriculum of teacher education is adjusted accordingly. In 1991 Beatrice Avalos described situations in Tanzania and Papua New Guinea that are useful examples of the risks encountered in such widening of the curriculum. In Tanzania, adherence was given to the belief that education should produce citizens who were self-reliant, especially as most children would not receive

more than a basic education. Schools were to be community schools that inculcated "socialist" work habits; were self-supporting financially; emphasized knowledge and skills useful to the village or rural community; and encouraged the participation of the community in school activities. Pursuit of these goals necessitated a broadening of the teacher education curriculum at the same time as the length of the program was shortened in order to produce graduates more quickly. In consequence of these changes, the curriculum became overcrowded and content-centered with little time for practical components. Avalos claimed that the teachers did not even achieve sufficient competence to teach basic literacy and numeracy, and concluded that great caution needs to be exerted in training teachers for more than one purpose.

Providing actual teaching experience in real school situations (the practicum) is one of the most challenging tasks for planners of teacher education. Traditionally, in the elementary school context, the student teacher was placed with a volunteer school teacher and would be assigned lessons to design, prepare, and present under that teacher's guidance. Usually these lessons would number about three per day, after an initial period of orientation and observation, for about three weeks each year of the program. The teacher would provide feedback on a selection of those lessons but, in order to develop confidence and independence, would not be present for all of the lessons, especially toward the end of the period of practice teaching. The college or university in which the student teacher was enrolled would usually appoint one of its own faculty to supervise this process and that person would visit and observe the student teacher on several occasions and would have the responsibility of reporting on progress and awarding a grade, after discussing the experience with both the student and the cooperating teacher. Student teachers would often have other assignments to complete as well as those involving face-to-face teaching. For example, they might be required to establish a file on school organization and curriculum resources in the school. In the context of the secondary school, in which the student teacher might be obtaining experience in a number of specialist subject areas involving more than one school department, a corresponding number of cooperating teachers and college or university supervisors might be appointed.

This traditional approach to the practicum has been criticized on the grounds that it militates against bridging the gap between theory and practice, when the two might be learned more effectively if integrated. In some cases the problem was approached by trying to make the university or college the site of more practically orientated school experiences. Thus, such innovations as laboratory schools were established at the university. Over the last three decades of the twentieth century, the bridge was sought in the form of simulations, such as microteaching. Microteaching usually occurred on the campus of the college or university. It consisted of scaled-down teaching situations in which shorter than normal lessons would be taught to smaller groups of students with limited numbers of teaching skills to be practiced in pursuit of a small number of learning objectives. Usually, teaching spaces were developed and built specifically for

the environment of microteaching. The lessons would be videotaped, so that the student teacher could view the lesson, often in consultation with peers and a supervisor or mentor, and obtain feedback which could be used in replanning the lessons.

While the controlled context in which microteaching occurs has facilitated much research on its effectiveness, there has been concern about the extent to which skills developed under microteaching conditions are transferred to normal classroom situations. It has been argued that there is no adequate substitute for real experience in normal classrooms and seldom, if ever, was reliance placed on microteaching as a complete substitute for actual classroom experience. Indeed, some systems have sought to make school experience the central component of teacher education in what has become known as "school-based teacher education" or, at least, by providing much more enduring periods of school experience at some stage of the teacher education program. A medical model has sometimes been applied, with student teachers approaching the end of their programs becoming "interns" attached to schools for a semester, or even a year. Critics often claimed that professional experiences gained through such innovations as microteaching and such models as "performance-based" or "competency-based" teacher education gave too much emphasis to the "performance" or "behavioral" aspects of teaching at the expense of insight and reflection.

Accordingly, calls for more reflective approaches were made and were accepted. The concept of reflective teacher education generated much literature in the 1980s and 1990s. In 1998, Marvin Wideen and colleagues, after an extensive review of research on the effectiveness of innovations in teacher education, including reflective practice, found little encouragement for their adoption, and concluded that such innovations have little ability to affect beginning teachers within teacher education structures common at the end of the twentieth century.

3

Redefining the Role of Teacher: It's a Multifaceted Profession

Instruction doesn't consist primarily of lecturing to students who sit in rows at desks, dutifully listening and recording what they hear, but, rather, offers every child a rich, rewarding, and unique learning experience. The educational environment isn't confined to the classroom but, instead, extends into the home and the community and around the world. Information isn't bound primarily in books; it's available everywhere in bits and bytes.

Students aren't consumers of facts. They are active creators of knowledge. Schools aren't just brick-and-mortar structures — they're centers of lifelong learning. And, most important, teaching is recognized as one of the most challenging and respected career choices, absolutely vital to the social, cultural, and economic health of our nation.

Today, the seeds of such a dramatic transformation in education are being planted. Prompted by massive revolutions in knowledge, information technology, and public demand for better learning, schools nationwide are slowly but surely restructuring themselves.

Leading the way are thousands of teachers who are rethinking every part of their jobs — their relationship with students, colleagues, and the community; the tools and techniques they employ; their rights and responsibilities; the form and content of curriculum; what standards to set and how to assess whether they are being met; their preparation as teachers and their ongoing professional development; and the very structure of the schools in which they work. In short, teachers are reinventing themselves and their occupation to better serve schools and students.

TEACHER

A teacher (also called a school teacher or, in some contexts, an educator) is a person who helps others to acquire knowledge, competences or values.

Informally the role of teacher may be taken on by anyone (*e.g.* when showing a colleague how to perform a specific task). In some countries, teaching young people of school age may be carried out in an informal setting, such as within the family, (homeschooling) rather than in a formal setting such as a school or college. Some other professions may involve a significant amount of teaching (*e.g.* youth worker, pastor). In most countries, *formal* teaching is usually carried out by paid professional teachers. This article focuses on those who are *employed*, as their main role, to teach others in a *formal* education context, such as at a school or other place of *initial* formal education or training.

DUTIES AND FUNCTIONS

Chilean school children during a class photograph with their teacher, 2002

A teacher's role may vary among cultures.

Teachers may provide instruction in literacy and numeracy, craftsmanship or vocational training, the arts, religion, civics, community roles, or life skills.

Formal teaching tasks include preparing lessons according to agreed curricula, giving lessons, and assessing pupil progress. A teacher's professional duties may extend beyond formal teaching. Outside of the classroom teachers may accompany students on field trips, supervise study halls, help with the organization of school functions, and serve as supervisors for extracurricular activities. In some education systems, teachers may have responsibility for student discipline.

COMPETENCES AND QUALITIES REQUIRED BY TEACHERS

Teaching is a highly complex activity. This is in part because teaching is a social practice, that takes place in a specific context (time, place, culture, socio-political-economic situation etc.) and therefore reflects the values of that specific context. Factors that influence what is expected (or required) of teachers include history and tradition, social views about the purpose of education, accepted theories about learning etc.

Competences

So the competences required by a teacher are affected by the different ways in which the role is understood around the world.

Broadly, there seem to be four models:

- The teacher as manager of instruction;
- The teacher as caring person;
- The teacher as expert learner; and
- The teacher as cultural and civic person.

The OECD has argued that it is necessary to develop a shared definition of the skills and knowledge required by teachers, in order to guide teachers' career-long education and professional development. Some evidence-based international discussions have tried to reach such a common understanding.

For example, the European Union has identified three broad areas of competences that teachers require:

- Working with others
- Working with knowledge, technology and information, and
- Working in and with society.

Scholarly consensus is emerging that what is required of teachers can be grouped under three headings:

- Knowledge (such as: the subject matter itself and knowledge about how to teach it, curricular knowledge, knowledge about the educational sciences, psychology, assessment etc.)
- Craft skills (such as lesson planning, using teaching technologies, managing students and groups, monitoring and assessing learning etc.) and
- Dispositions (such as essential values and attitudes, beliefs and commitment).

Qualities

Enthusiasm

A teacher interacts with older students at a school in New Zealand

It has been found that teachers who showed enthusiasm towards the course materials and students can create a positive learning experience. These teachers do not teach by rote but attempt to find new invigoration for the course materials on a daily basis. One of the challenges facing teachers is that they may have repeatedly covered a curriculum until they begin to feel bored with the subject, and their attitude may in turn bore the students. Students who had enthusiastic teachers tend to rate them higher than teachers who didn't show much enthusiasm for the course materials.

A primary school teacher on a picnic with her students, Colombia, 2014

Teachers that exhibit enthusiasm can lead to students who are more likely to be engaged, interested, energetic, and curious about learning the subject matter. Recent research has found a correlation between teacher enthusiasm and students' intrinsic motivation to learn and vitality in the classroom. Controlled, experimental studies exploring intrinsic motivation of college students has shown that non-verbal expressions of enthusiasm, such as demonstrative gesturing, dramatic movements which are varied, and emotional facial expressions, result in college students reporting higher levels of intrinsic motivation to learn. Students who experienced a very enthusiastic teacher were more likely to read lecture material outside of the classroom.

There are various mechanisms by which teacher enthusiasm may facilitate higher levels of intrinsic motivation. Teacher enthusiasm may contribute to a classroom atmosphere of energy and enthusiasm which feeds student interest and excitement in learning the subject matter. Enthusiastic teachers may also lead to students becoming more self-determined in their own learning process. The concept of mere exposure indicates that the teacher's enthusiasm may contribute to the student's expectations about intrinsic motivation in the context of learning. Also, enthusiasm may act as a "motivational embellishment", increasing a student's interest by the variety, novelty, and surprise of the enthusiastic teacher's presentation of the material. Finally, the concept of

emotional contagion, may also apply; students may become more intrinsically motivated by catching onto the enthusiasm and energy of the teacher. "Motivating Students" Teach: Make a Difference. Teach Web site,Inc. 2017, Web, 15 March 2017. https://teach.com/what/teachers-change-lives/teachers-motivate/

Interaction with Learners

Research shows that student motivation and attitudes towards school are closely linked to student-teacher relationships. Enthusiastic teachers are particularly good at creating beneficial relations with their students. Their ability to create effective learning environments that foster student achievement depends on the kind of relationship they build with their students. Useful teacher-to-student interactions are crucial in linking academic success with personal achievement. Here, personal success is a student's internal goal of improving himself, whereas academic success includes the goals he receives from his superior. A teacher must guide her student in aligning her personal goals with her academic goals. Students who receive this positive influence show stronger self-confidence and greater personal and academic success than those without these teacher interactions.

Students are likely to build stronger relations with teachers who are friendly and supportive and will show more interest in courses taught by these teachers. Teachers that spend more time interacting and working directly with students are perceived as supportive and effective teachers. Effective teachers have been shown to invite student participation and decision making, allow humor into their classroom, and demonstrate a willingness to play.

The way a teacher promotes the course she is teaching affects how much benefit the student will get out of the subject matter. The three most important aspects of teacher enthusiasm are enthusiasm about teaching, enthusiasm about the students, and enthusiasm about the subject matter. A teacher must enjoy teaching. If they do not enjoy what they are doing, the students will be able to tell. They also must enjoy being around their students. A teacher who cares for their students is going to help them succeed in their life in the future. The teacher also needs to be enthusiastic about the subject matter she is teaching. For example, a teacher talking about chemistry needs to enjoy chemistry and show that to her students. A spark in the teacher may create a spark of excitement in the student as well. An enthusiastic teacher has the ability to be very influential in the young student's life.

TEACHING QUALIFICATIONS

In many countries, a person who wishes to become a teacher must first obtain specified professional qualifications or credentials from a university or college. These professional qualifications may include the study of pedagogy, the science of teaching. Teachers, like other professionals, may have to, or choose to, continue their education after they qualify, a process known as continuing professional development.

The issue of teacher qualifications is linked to the status of the profession. In some societies, teachers enjoy a status on a par with physicians, lawyers, engineers, and accountants, in others, the status of the profession is low. In the twentieth century, many intelligent women were unable to get jobs in corporations or governments so many chose teaching as a default profession. As women become more welcomed into corporations and governments today, it may be more difficult to attract qualified teachers in the future.

Teachers are often required to undergo a course of initial education at a College of Education to ensure that they possess the necessary knowledge, competences and adhere to relevant codes of ethics.

There are a variety of bodies designed to instill, preserve and update the knowledge and professional standing of teachers. Around the world many teachers' colleges exist; they may be controlled by government or by the teaching profession itself.

They are generally established to serve and protect the public interest through certifying, governing, quality controlling, and enforcing standards of practice for the teaching profession.

Professional Standards

The functions of the teachers' colleges may include setting out clear standards of practice, providing for the ongoing education of teachers, investigating complaints involving members, conducting hearings into allegations of professional misconduct and taking appropriate disciplinary action and accrediting teacher education programmes. In many situations teachers in publicly funded schools must be members in good standing with the college, and private schools may also require their teachers to be college members. In other areas these roles may belong to the State Board of Education, the Superintendent of Public Instruction, the State Education Agency or other governmental bodies. In still other areas Teaching Unions may be responsible for some or all of these duties.

Professional Misconduct

Misconduct by teachers, especially sexual misconduct, has been getting increased scrutiny from the media and the courts. A study by the American Association of University Women reported that 9.6% of students in the United States claim to have received unwanted sexual attention from an adult associated with education; be they a volunteer, bus driver, teacher, administrator or other adult; sometime during their educational career.

A study in England showed a 0.3% prevalence of sexual abuse by any professional, a group that included priests, religious leaders, and case workers as well as teachers. It is important to note, however, that this British study is the only one of its kind and consisted of "a random... probability sample of 2,869 young people between the ages of 18 and 24 in a computer-assisted study" and that the questions referred to "sexual abuse with a professional," not necessarily

a teacher. It is therefore logical to conclude that information on the percentage of abuses by teachers in the United Kingdom is not explicitly available and therefore not necessarily reliable. The AAUW study, however, posed questions about fourteen types of sexual harassment and various degrees of frequency and included only abuses by teachers. "The sample was drawn from a list of 80,000 schools to create a stratified two-stage sample design of 2,065 8th to 11th grade students". Its reliability was gauged at 95% with a 4% margin of error.

In the United States especially, several high-profile cases such as Debra LaFave, Pamela Rogers, and Mary Kay Letourneau have caused increased scrutiny on teacher misconduct.

Chris Keates, the general secretary of National Association of Schoolmasters Union of Women Teachers, said that teachers who have sex with pupils over the age of consent should not be placed on the sex offenders register and that prosecution for statutory rape "is a real anomaly in the law that we are concerned about." This has led to outrage from child protection and parental rights groups. Fears of being labelled a pedophile or hebephile has led to several men who enjoy teaching avoiding the profession. This has in some jurisdictions reportedly led to a shortage of male teachers.

PEDAGOGY AND TEACHING

The objective is typically accomplished through either an informal or formal approach to learning, including a course of study and lesson planthat teaches skills, knowledge and/or thinking skills. Different ways to teach are often referred to as pedagogy. When deciding what teaching method to use teachers consider students' background knowledge, environment, and their learning goals as well as standardized curricula as determined by the relevant authority. Many times, teachers assist in learning outside of the classroom by accompanying students on field trips. The increasing use of technology, specifically the rise of the internet over the past decade, has begun to shape the way teachers approach their roles in the classroom.

The objective is typically a course of study, lesson plan, or a practical skill. A teacher may follow standardized curricula as determined by the relevant authority. The teacher may interact with students of different ages, from infants to adults, students with different abilities and students with learning disabilities.

Teaching using pedagogy also involve assessing the educational levels of the students on particular skills. Understanding the pedagogy of the students in a classroom involves using differentiated instruction as well as supervision to meet the needs of all students in the classroom. Pedagogy can be thought of in two manners. First, teaching itself can be taught in many different ways, hence, using a pedagogy of teaching styles. Second, the pedagogy of the learners comes into play when a teacher assesses the pedagogic diversity of his/her students and differentiates for the individual students accordingly. For example, an experienced teacher and parent described the place of a teacher in learning as

follows: "The real bulk of learning takes place in self-study and problem solving with a lot of feedback around that loop. The function of the teacher is to pressure the lazy, inspire the bored, deflate the cocky, encourage the timid, detect and correct individual flaws, and broaden the viewpoint of all. This function looks like that of a coach using the whole gamut of psychology to get each new class of rookies off the bench and into the game."

Perhaps the most significant difference between primary school and secondary school teaching is the relationship between teachers and children. In primary schools each class has a teacher who stays with them for most of the week and will teach them the whole curriculum. In secondary schools they will be taught by different subject specialists each session during the week and may have ten or more different teachers. The relationship between children and their teachers tends to be closer in the primary school where they act as form tutor, specialist teacher and surrogate parent during the course of the day.

This is true throughout most of the United States as well. However, alternative approaches for primary education do exist. One of these, sometimes referred to as a "platoon" system, involves placing a group of students together in one class that moves from one specialist to another for every subject. The advantage here is that students learn from teachers who specialize in one subject and who tend to be more knowledgeable in that one area than a teacher who teaches many subjects. Students still derive a strong sense of security by staying with the same group of peers for all classes.

Co-teaching has also become a new trend amongst educational institutions. Co-teaching is defined as two or more teachers working harmoniously to fulfill the needs of every student in the classroom. Co-teaching focuses the student on learning by providing a social networking support that allows them to reach their full cognitive potential. Co-teachers work in sync with one another to create a climate of learning.

CLASSROOM MANAGEMENT

Teachers and School "Discipline"

Throughout the history of education the most common form of school discipline was corporal punishment. While a child was in school, a teacher was expected to act as a substitute parent, with all the normal forms of parental discipline open to them.

In past times, corporal punishment (spanking or paddling or caning or strapping or birching the student in order to cause physical pain) was one of the most common forms of school discipline throughout much of the world. Most Western countries, and some others, have now banned it, but it remains lawful in the United States following a US Supreme Court decision in 1977 which held that paddling did not violate the US Constitution.

30 US states have banned corporal punishment, the others (mostly in the South) have not. It is still used to a significant (though declining) degree in

some public schools in Alabama, Arkansas, Georgia, Louisiana, Mississippi, Oklahoma, Tennessee and Texas. Private schools in these and most other states may also use it. Corporal punishment in American schools is administered to the seat of the student's trousers or skirt with a specially made wooden paddle. This often used to take place in the classroom or hallway, but nowadays the punishment is usually given privately in the principal's office.

Official corporal punishment, often by caning, remains commonplace in schools in some Asian, African and Caribbean countries. For details of individual countries see School corporal punishment.

Currently detention is one of the most common punishments in schools in the United States, the UK, Ireland, Singapore and other countries. It requires the pupil to remain in school at a given time in the school day (such as lunch, recess or after school); or even to attend school on a non-school day, *e.g.* "Saturday detention" held at some schools. During detention, students normally have to sit in a classroom and do work, write lines or a punishment essay, or sit quietly.

A modern example of school discipline in North America and Western Europe relies upon the idea of an assertive teacher who is prepared to impose their will upon a class. Positive reinforcement is balanced with immediate and fair punishment for misbehaviour and firm, clear boundaries define what is appropriate and inappropriate behaviour. Teachers are expected to respect their students; sarcasm and attempts to humiliate pupils are seen as falling outside of what constitutes reasonable discipline.

Whilst this is the consensus viewpoint amongst the majority of academics, some teachers and parents advocate a more assertive and confrontational style of discipline. Such individuals claim that many problems with modern schooling stem from the weakness in school discipline and if teachers exercised firm control over the classroom they would be able to teach more efficiently. This viewpoint is supported by the educational attainment of countries—in East Asia for instance—that combine strict discipline with high standards of education.

It's not clear, however that this stereotypical view reflects the reality of East Asian classrooms or that the educational goals in these countries are commensurable with those in Western countries. In Japan, for example, although average attainment on standardized tests may exceed those in Western countries, classroom discipline and behaviour is highly problematic. Although, officially, schools have extremely rigid codes of behaviour, in practice many teachers find the students unmanageable and do not enforce discipline at all.

Where school class sizes are typically 40 to 50 students, maintaining order in the classroom can divert the teacher from instruction, leaving little opportunity for concentration and focus on what is being taught. In response, teachers may concentrate their attention on motivated students, ignoring attention-seeking and disruptive students. The result of this is that motivated students, facing demanding university entrance examinations, receive disproportionate resources. Given the emphasis on attainment of university places, administrators and governors may regard this policy as appropriate.

Obligation to Honour Students Rights

Sudbury model democratic schools claim that popularly based authority can maintain order more effectively than dictatorial authority for governments and schools alike. They also claim that in these schools the preservation of public order is easier and more efficient than anywhere else. Primarily because rules and regulations are made by the community as a whole, thence the school atmosphere is one of persuasion and negotiation, rather than confrontation since there is no one to confront. Sudbury model democratic schools' proponents argue that a school that has good, clear laws, fairly and democratically passed by the entire school community, and a good judicial system for enforcing these laws, is a school in which community discipline prevails, and in which an increasingly sophisticated concept of law and order develops, against other schools today, where rules are arbitrary, authority is absolute, punishment is capricious, and due process of law is unknown.

OCCUPATIONAL HAZARDS

Teachers face several occupational hazards in their line of work, including occupational stress, which can negatively impact teachers' mental and physical health, productivity, and students' performance. Stress can be caused by organizational change, relationships with students, fellow teachers, and administrative personnel, working environment, expectations to substitute, long hours with a heavy workload, and inspections. Teachers are also at high risk for occupational burnout.

A 2000 study found that 42% of UK teachers experienced occupational stress, twice the figure for the average profession. A 2012 study found that teachers experienced double the rate of anxiety, depression, and stress than average workers.

There are several ways to mitigate the occupational hazards of teaching. Organizational interventions, like changing teachers' schedules, providing support networks and mentoring, changing the work environment, and offering promotions and bonuses, may be effective in helping to reduce occupational stress among teachers. Individual-level interventions, including stress-management training and counseling, are also used to relieve occupational stress among teachers.

Apart from this, teachers are often not given sufficient opportunities for professional growth or promotions. This leads to some stagnancy, as there is not sufficient interests to enter the profession. An organisation in India called Centre for Teacher Accreditation (CENTA) is working to reduce this hazard, by trying to open opportunities for teachers in India.

TEACHING AROUND THE WORLD

There are many similarities and differences among teachers around the world. In almost all countries teachers are educated in a university or college. Governments may require certification by a recognized body before they can

teach in a school. In many countries, elementary school education certificate is earned after completion of high school. The high school student follows an education specialty track, obtain the prerequisite "student-teaching" time, and receive a special diploma to begin teaching after graduation. In addition to certification, many educational institutions especially within the US, require that prospective teachers pass a background check and psychiatric evaluation to be able to teach in classroom. This is not always the case with adult further learning institutions but is fast becoming the norm in many countries as security concerns grow.

International schools generally follow an English-speaking, Western curriculum and are aimed at expatriate communities.

Australia

Education in Australia is primarily the responsibility of the individual states and territories. Generally, education in Australia follows the three-tier model which includes primary education (primary schools), followed by secondary education (secondary schools/high schools) and tertiary education(universities and/or TAFE colleges).

Canada

Teaching in Canada requires a post-secondary degree Bachelor's Degree. In most provinces a second Bachelor's Degree such as a Bachelor of Education is required to become a qualified teacher. Salary ranges from $40,000/year to $90,000/yr. Teachers have the option to teach for a public school which is funded by the provincial government or teaching in a private school which is funded by the private sector, businesses and sponsors.

France

In France, teachers, or *professors*, are mainly civil servants, recruited by competitive examination.

Germany

In Germany, teachers are mainly civil servants recruited in special university classes, called *Lehramtstudien* (*Teaching Education Studies*). There are many differences between the teachers for elementary schools (*Grundschule*), lower secondary schools (*Hauptschule*), middle level secondary schools (*Realschule*) and higher level secondary schools (*Gymnasium*). Salaries for teachers depend on the civil servants' salary index scale (*Bundesbesoldungsordnung*).

Ireland

Salaries for primary teachers in Ireland depend mainly on seniority (*i.e.* holding the position of principal, deputy principal or assistant principal), experience and qualifications. Extra pay is also given for teaching through the Irish language, in a Gaeltacht area or on an island. The basic pay for a starting

teacher is €27,814 p.a., rising incrementally to €53,423 for a teacher with 25 years service. A principal of a large school with many years experience and several qualifications (M.A., H.Dip., etc.) could earn over €90,000.

Teachers are required to be registered with the Teaching Council; under Section 30 of the Teaching Council Act 2001, a person employed in any capacity in a recognised teaching post - who is not registered with the Teaching Council - may not be paid from Oireachtas funds.

From 2006 Garda vetting has been introduced for new entrants to the teaching profession. These procedures apply to teaching and also to non-teaching posts and those who refuse vetting "cannot be appointed or engaged by the school in any capacity including in a voluntary role". Existing staff will be vetted on a phased basis.

United Kingdom

Education in the United Kingdom is a devolved matter with each of the countries of the United Kingdom having separate systems.

England

Main article: Education in England

Salaries for Nursery, Primary and Secondary School teachers ranged from £20,133 to £41,004 in September 2007, although some salaries can go much higher depending on experience and extra responsibilities. Preschool teachers may earn £20,980 annually. Teachers in state schools must have at least a bachelor's degree, complete an approved teacher education programme, and be licensed.

Many counties offer alternative licensing programmes to attract people into teaching, especially for hard-to-fill positions. Excellent job opportunities are expected as retirements, especially among secondary school teachers, outweigh slowing enrollment growth; opportunities will vary by geographic area and subject taught.

Scotland

In Scotland, anyone wishing to teach must be registered with the General Teaching Council for Scotland (GTCS). Teaching in Scotland is an all graduate profession and the normal route for graduates wishing to teach is to complete a programme of Initial Teacher Education (ITE) at one of the seven Scottish Universities who offer these courses. Once successfully completed, "Provisional Registration" is given by the GTCS which is raised to "Full Registration" status after a year if there is sufficient evidence to show that the "Standard for Full Registration" has been met.

For the salary year beginning April 2008, unpromoted teachers in Scotland earned from £20,427 for a Probationer, up to £32,583 after 6 years teaching, but could then go on to earn up to £39,942 as they complete the modules to earn Chartered Teacher Status (requiring at least 6 years at up to two modules per year.) Promotion to Principal Teacher positions attracts a salary of between

£34,566 and £44,616; Deputy Head, and Head teachers earn from £40,290 to £78,642. Teachers in Scotland can be registered members of trade unions with the main ones being the Educational Institute of Scotland and the Scottish Secondary Teachers' Association.

Wales

Education in Wales differs in certain respects from education elsewhere in the United Kingdom. For example, a significant number of students all over Wales are educated either wholly or largely through the medium of Welsh: in 2008/09, 22 per cent of classes in maintained primary schools used Welsh as the sole or main medium of instruction. Welsh medium education is available to all age groups through nurseries, schools, colleges and universities and in adult education; lessons in the language itself are compulsory for all pupils until the age of 16.

Teachers in Wales can be registered members of trade unions such as ATL, NUT or NASUWT and reports in recent years suggest that the average age of teachers in Wales is falling with teachers being younger than in previous years. A growing cause of concern are that attacks on teachers in Welsh schools which reached an all-time high between 2005 and 2010.

United States

In the United States, each state determines the requirements for getting a license to teach in public schools. Teaching certification generally lasts three years, but teachers can receive certificates that last as long as ten years. Public school teachers are required to have a bachelor's degree and the majority must be certified by the state in which they teach. Many charter schools do not require that their teachers be certified, provided they meet the standards to be highly qualified as set by No Child Left Behind. Additionally, the requirements for substitute/temporary teachers are generally not as rigorous as those for full-time professionals. The Bureau of Labour Statistics estimates that there are 1.4 million elementary school teachers, 674,000 middle school teachers, and 1 million secondary school teachers employed in the U.S.

In the past, teachers have been paid relatively low salaries. However, average teacher salaries have improved rapidly in recent years. US teachers are generally paid on graduated scales, with income depending on experience. Teachers with more experience and higher education earn more than those with a standard bachelor's degree and certificate. Salaries vary greatly depending on state, relative cost of living, and grade taught. Salaries also vary within states where wealthy suburban school districts generally have higher salary schedules than other districts. The median salary for all primary and secondary teachers was $46,000 in 2004, with the average entry salary for a teacher with a bachelor's degree being an estimated $32,000. Median salaries for preschool teachers, however, were less than half the national median for secondary teachers, clock in at an estimated $21,000 in 2004. For high school teachers, median salaries in

2007 ranged from $35,000 in South Dakota to $71,000 in New York, with a national median of $52,000. Some contracts may include long-term disability insurance, life insurance, emergency/personal leave and investment options. The American Federation of Teachers' teacher salary survey for the 2006-07 school year found that the average teacher salary was $51,009. In a salary survey report for K-12 teachers, elementary school teachers had the lowest median salary earning $39,259. High school teachers had the highest median salary earning $41,855. Many teachers take advantage of the opportunity to increase their income by supervising after-school programmes and other extracurricular activities. In addition to monetary compensation, public school teachers may also enjoy greater benefits (like health insurance) compared to other occupations. Merit pay systems are on the rise for teachers, paying teachers extra money based on excellent classroom evaluations, high test scores and for high success at their overall school. Also, with the advent of the internet, many teachers are now selling their lesson plans to other teachers through the web in order to earn supplemental income, most notably on TeachersPayTeachers.com.

NEW RELATIONSHIPS AND PRACTICES

Traditionally, teaching was a combination of information-dispensing, custodial child care and sorting out academically inclined students from others. The underlying model for schools was an education factory in which adults, paid hourly or daily wages, kept like-aged youngsters sitting still for standardized lessons and tests.

Teachers were told what, when, and how to teach. They were required to educate every student in exactly the same way and were not held responsible when many failed to learn. They were expected to teach using the same methods as past generations, and any deviation from traditional practices was discouraged by supervisors or prohibited by myriad education laws and regulations. Thus, many teachers simply stood in front of the class and delivered the same lessons year after year, growing gray and weary of not being allowed to change what they were doing.

Many teachers today, however, are encouraged to adapt and adopt new practices that acknowledge both the art and science of learning. They understand that the essence of education is a close relationship between a knowledgeable, caring adult and a secure, motivated child. They grasp that their most important role is to get to know each student as an individual in order to comprehend his or her unique needs, learning style, social and cultural background, interests, and abilities.

This attention to personal qualities is all the more important as America continues to become the most pluralistic nation on Earth. Teachers have to be committed to relating to youngsters of many cultures, including those young people who, with traditional teaching, might have dropped out — or have been forced out — of the education system.

Their job is to counsel students as they grow and mature — helping them integrate their social, emotional, and intellectual growth — so the union of these sometimes separate dimensions yields the abilities to seek, understand, and use knowledge; to make better decisions in their personal lives; and to value contributing to society.

They must be prepared and permitted to intervene at any time and in any way to make sure learning occurs. Rather than see themselves solely as masters of subject matter such as history, math, or science, teachers increasingly understand that they must also inspire a love of learning.

In practice, this new relationship between teachers and students takes the form of a different concept of instruction. Tuning in to how students really learn prompts many teachers to reject teaching that is primarily lecture based in favor of instruction that challenges students to take an active role in learning.

They no longer see their primary role as being the king or queen of the classroom, a benevolent dictator deciding what's best for the powerless underlings in their care. They've found they accomplish more if they adopt the role of educational guides, facilitators, and co-learners.

The most respected teachers have discovered how to make students passionate participants in the instructional process by providing project-based, participatory, educational adventures. They know that in order to get students to truly take responsibility for their own education, the curriculum must relate to their lives, learning activities must engage their natural curiosity, and assessments must measure real accomplishments and be an integral part of learning.

Students work harder when teachers give them a role in determining the form and content of their schooling — helping them create their own learning plans and deciding the ways in which they will demonstrate that they have, in fact, learned what they agreed to learn.

The day-to-day job of a teacher, rather than broadcasting content, is becoming one of designing and guiding students through engaging learning opportunities. An educator's most important responsibility is to search out and construct meaningful educational experiences that allow students to solve real-world problems and show they have learned the big ideas, powerful skills, and habits of mind and heart that meet agreed-on educational standards.

The result is that the abstract, inert knowledge that students used to memorize from dusty textbooks comes alive as they participate in the creation and extension of new knowledge.

NEW TOOLS AND ENVIRONMENTS

One of the most powerful forces changing teachers' and students' roles in education is new technology. The old model of instruction was predicated on information scarcity.

Teachers and their books were information oracles, spreading knowledge to a population with few other ways to get it. But today's world is awash in information from a multitude of print and electronic sources.

The fundamental job of teaching is no longer to distribute facts but to help children learn how to use them by developing their abilities to think critically, solve problems, make informed judgments, and create knowledge that benefits both the students and society. Freed from the responsibility of being primary information providers, teachers have more time to spend working one-on-one or with small groups of students.

Recasting the relationship between students and teachers demands that the structure of school changes as well. Though it is still the norm in many places to isolate teachers in cinderblock rooms with age-graded pupils who rotate through classes every hour throughout a semester — or every year, in the case of elementary school — this paradigm is being abandoned in more and more schools that want to give teachers the time, space, and support to do their jobs.

Extended instructional periods and school days, as well as reorganized yearly schedules, are all being tried as ways to avoid chopping learning into often arbitrary chunks based on limited time. Also, rather than inflexibly group students in grades by age, many schools feature mixed-aged classes in which students spend two or more years with the same teachers.

In addition, ability groups, from which those judged less talented can rarely break free, are being challenged by a recognition that current standardized tests do not measure many abilities or take into account the different ways people learn best.

One of the most important innovations in instructional organization is team teaching, in which two or more educators share responsibility for a group of students. This means that an individual teacher no longer has to be all things to all students. This approach allows teachers to apply their strengths, interests, skills, and abilities to the greatest effect, knowing that children won't suffer from their weaknesses, because there's someone with a different set of abilities to back them up.

To truly professionalize teaching, in fact, we need to further differentiate the roles a teacher might fill. Just as a good law firm has a mix of associates, junior partners, and senior partners, schools should have a greater mix of teachers who have appropriate levels of responsibility based on their abilities and experience levels. Also, just as much of a lawyer's work occurs outside the courtroom, so, too, should we recognize that much of a teacher's work is done outside the classroom.

NEW PROFESSIONAL RESPONSIBILITIES

Aside from rethinking their primary responsibility as directors of student learning, teachers are also taking on other roles in schools and in their profession. They are working with colleagues, family members, politicians, academics, community members, employers, and others to set clear and obtainable standards for the knowledge, skills, and values we should expect America's children to acquire.

They are participating in day-to-day decision making in schools, working side-by-side to set priorities, and dealing with organizational problems that

affect their students' learning. Many teachers also spend time researching various questions of educational effectiveness that expand the understanding of the dynamics of learning. And more teachers are spending time mentoring new members of their profession, making sure that education school graduates are truly ready for the complex challenges of today's classrooms.

Reinventing the role of teachers inside and outside the classroom can result in significantly better schools and better-educated students. But though the roots of such improvement are taking hold in today's schools, they need continued nurturing to grow and truly transform America's learning landscape. The rest of us — politicians and parents, superintendents and school board members, employers and education school faculty — must also be willing to rethink our roles in education to give teachers the support, freedom, and trust they need to do the essential job of educating our children.

CHANGING ROLE OF THE TEACHER

The current system of schooling poses tremendous burden on children. Educationists are of the view that the burden arises from treating knowledge as a given', an external reality existing outside the learner and embedded in textbooks. Knowledge is essentially a human construct, a continuously evolving process of reflective learning. The NCF 2005, requires a teacher to be a facilitator of children's learning in a manner that the child is helped to construct his/her knowledge. Education is not a mechanical activity of information transmission and teachers are not information dispensers. Teachers have to increasingly play the role of crucial mediating agents through whom curriculum is transacted.

Challenges in Teacher Education: Unprecedented expansion of teacher education institutions and programmes during the past few years characterizes the teacher education scenario of today. With increasing school enrolments and the launch of pan-Indian primary education development programmes like Operation Blackboard, District Primary Education Programme, Sarva Shiksha Abhiyan and Universalization of Elementary Education, there was a natural increase in the demand for teachers. Added to this, the backlog of untrained teachers in the system and the essential requirement of pre-service teacher certification for appointment as a teacher led to mounting pressure on existing institutional capacity.

The demand far exceeding supply, market forces have taken over unprecedented rise in the number of teacher education institutions in most parts of the country. From 3489 courses in 3199 institutions and an intake of 2,74,072 in 2004, the numbers in December, 2008 swelled to 14,523 courses in 12,200 institutions with an intake of 10,73,661 at different levels. This expansion has taken a heavy toll on quality parameters like infrastructure, faculty learning resources and student profile. Teacher education as a whole needs urgent and comprehensive reform. There is a need to bring greater convergence 14 between professional preparation and continuing professional development of teachers at all stages of schooling in terms of level, duration and structure. Considering

the complexity and significance of teaching as a professional practice, it is imperative that the entire enterprise of teacher education should be raised to a university level and that the duration and rigour of programmes should be appropriately enhanced. Research and Innovation: There is a need to increase research that documents practices reflectively and analytically- whether it is of programs or of individual classrooms – so that it can be included in the body of knowledge available for study to student teachers.

University departments and research institutions need to undertake such research. In addition there is a need to innovate with different models of teacher education. Institutional capacity and capability to innovate and create are a pre-requisite for the pursuit of excellence. Hence in the present scenario a lot of impetus has been given to research. Many teacher educators are encouraged to take up either major or minor research projects. Inclusive Education: There are two kinds of exclusion prevalent in schools; one is the exclusion of the child with disabilities and the second is the social exclusion of children who come from socially and economically deprived backgrounds. There is a dire need to equip teachers to overcome their biases in these regards and positively handle these challenges.

The Persons with Disabilities (PWD) Act of 2005 provides for free and compulsory education up to the age of 18 years for all children with disabilities. The education of socially and economically disadvantaged groups, especially the SCs, STs and minorities has remained a primary national concern of education for several years. The enrolment and retention of girls and therefore their participation has also remained behind those of boys. Teachers will have to be specially equipped if the social deprivation has to be overcome through education. Perspectives for equitable and sustainable development: In order to develop future citizens who promote equitable and sustainable development for all sections of society and respect for all, it is necessary that they be educated through perspectives of 15 gender equity, perspectives that develop values for peace, respect the rights of all, and that respect and value work. In the present ecological crisis promoted by extremely commercialized and competitive lifestyles, children need to be educated to change their consumption patterns and the way they look at natural resources. There is also a increasing violence and polarization both within children and between them, that is being caused by increasing stress in society. Education has a crucial role to play in promoting values of peace based on equal respect of self and others. The NCF 2005 and subsequent development of syllabi and materials is attempting to do this as well.

STRUCTURE

Most systems provide teacher education in face-to-face situations to students attending institutions of higher education. However, many teachers around the world receive substantial components of their training through distance education. Beginning near the end of the 1950s, this approach involved the use

of postal services for the delivery of learning materials to students remote from an institution, and the sending back of completed assignments by the students. The correspondence elements of this model were supplemented with tutorials conducted at centers located within reach of enough students to form a group. On a number of occasions tutors would meet with the groups to render the process in more motivating social contexts and to deal with students at a more personal level. Sometimes students traveled to the campuses for residential schools. Telephone hook-ups were also arranged by land line or even satellite. Two Australian universities, the University of New England and the University of Queensland, pioneered this approach to distance teacher education. As technical electronic advances occurred with the introduction of personal computers and electronic mail the process became much faster and more efficient. Distance education is a relatively inexpensive approach that is especially useful in locations where populations are sparse and distances are great.

The duration of teacher education programs varies across systems from a year or less to four or even five years. That range exists in quite a variety of countries and seems not always to depend on the economic development level of the countries concerned. Among the African developing countries of Algeria, Ghana, Nigeria, Ivory Coast, Morocco, and Kenya, the range in 1990 was from one to five years. In Australia, recruits who have completed three-or four-year university bachelor's degrees can complete a professional teaching qualification in one year, while most choose to enter teaching immediately after completing secondary schooling and then take up to four years to complete a bachelor of education degree.

The crucial factor is the foundation on which the professional training is based. Sometimes systems try to compensate for lack of a full secondary education in its recruits by adding time to the training program in which to supply missing knowledge and skills. However, this can increase the costs of teacher education to prohibitive levels.

One of the chief controversies in initial teacher education in more developed countries in the second half of the twentieth century was whether professional components of programs should be offered concurrently with academic components or consecutively. It became commonly accepted that concurrent programs were preferable. However, fluctuations in teacher supply and demand, and the demands of other programs in universities often resulted in decisions being adopted on the basis of practicalities rather than ideals, so that consecutive programs began to take precedence. Continuous, or concurrent, programs tend to introduce professional components early and in close association with general education and specialist academic studies. Consecutive programs, sometimes called "end-on" programs, delay the introduction of professional components until general and specialist studies have been completed.

Especially controversial during the 1970s, 1980s, and 1990s were the relationships between the university or college offering the programs and the

schools for which the student teachers were being prepared. Traditionally, schools provided professional experiences during the *practicum* component of the program, perhaps for up to three periods of three or four weeks a year. However, the role of the schools in initial teacher education generally became greater during those decades. In some cases, the school became the locus of the program, with student teachers being based in schools rather than in universities or colleges. Crucial to this controversy was the role of experienced teachers employed in the schools. Whereas it had been more usual for them to act as advisers and supervisors of initial school experience, they now sometimes undertook much more onerous responsibilities, such as designing and coordinating the whole program, with universities providing a supporting role and awarding the final qualification.

The types of institutions offering initial teacher education programs also vary from system to system. In some places, teacher education, especially at the elementary level, is offered in single purpose, state-run or private colleges known often as teachers colleges or colleges of education. In other countries, teacher education is offered by multipurpose institutions, sometimes called polytechnics, which are tertiary education institutions emphasizing training for a variety of occupations, for example paramedical services, occupational therapy, and journalism. During the 1990s both England and Australia restructured their higher education systems so that all such institutions became new universities or additional components of existing universities. All of these institutions work in conjunction with early childhood, elementary, and secondary schools, which provide practice teaching experiences for teacher education students.

CURRICULUM ORGANISATION AND STRUCTURE

The curriculum is delivered through modules which are defined as 'elements' of learning. Each module has specified learning outcomes and associated assessment criteria. The course that you are studying will be made up of modules that together make up the named award for which you are enrolled.

Most courses will include:

- Mandatory modules (also known as core modules on some programmes) are modules that are required to be passed for the award)
- Elective modules (also known as designate modules on some programmes) are choices from a prescribed list(s) of modules.
- Option modules are options you can choose beyond elective or designate modules.

For some courses there is a formal prerequisite relationship between modules, requiring award of credit for the one module before enrolling on a linked follow up module.

Individual modules for undergraduate study are in multiples of ten credit points and are set at a specified level. Level 3 is equivalent to foundation undergraduate study (this was previously level 0), level 4 to basic/introductory undergraduate

study (this was previously level 1), level 5 to intermediate undergraduate study (which was previously level 2) and level 6 to final/advanced undergraduate study (which was previously level 3). Successful completion of a module and being awarded credit at the specified level is accumulated towards a specific award.

A full-time student will normally undertake modules to a value of 120 credits in one year 60 credits per semester. A part-time student may have more flexibility and may often be able to negotiate the amount of credit taken per year, but on average this would normally be 60-80 credits per year. A student taking more than 80 credits in any academic year would normally be classified as full-time.

On this basis a full-time student could achieve a degree award in three years (not counting any major sandwich placements) and a part-time student in five to six years.

Individual modules for post-graduate study are in multiples of 5 credit points, with a minimum of five credit points and, normally, a maximum value of 60 credits. Modules of 60 credits are normally only used for a dissertation/research project. Taught modules are normally not more than 30 credits. Each module successfully completed earns you credit at Masters level which is accumulated towards a specific award.

On a full-time basis a student would normally achieve a post-graduate diploma in two semesters, at 60 credits per semester, with a further three months normally required for the final Masters stage. A part-time student may negotiate the amount of credit taken per year, but on average this would normally be 60 credits per year. On this basis a full-time student could achieve a Masters award in one calendar year and a part-time student in three years.

Students may negotiate the completion of a programme of study by a mixture of full-time and part-time study to do this you would need to see your Programme Leader to agree a programme of study that is appropriate to your needs.

WHY INTEGRATE?

Educators are motivated to foster curriculum integration for both academic and ideological reasons. Such integration offers several potential academic benefits:

(1) Curriculum integration fosters the ongoing reinforcement of skills and information learned in one area of study when utilized in another area.
(2) Curriculum integration provides students a richer academic experience by broadening the context and applicability of information and skills that are learned.
(3) Curriculum integration maximizes the utilization of learning time by "borrowing" from one area to support another. This is particularly important in Jewish day schools where educators face time pressures in all curricular areas.

On an ideological level, curriculum integration helps to create holistic students who are able to see the relevance of their Judaism in all areas of their lives. This prevents compartmentalization in which students separate between the religious and secular aspects of their lives. Such separation can lead to competition between the two worlds, with the Jewish component often losing out.

WHAT IS INTEGRATION?

We might find valuable insights into the issue of curriculum integration in the literature in general education. A common misconception among Jewish educators is that curriculum integration by definition involves interdisciplinary study. Fogarty (1991) identifies ten models of integration that fall into three general categories: 1) integration within single disciplines, 2) integration across several disciplines, and 3) integration within and across learners. She defines the goal of integration as follows: "to help young minds discover roots running underground whereby contrary and remote things cohere and flower out from one stem."

As such, integration represents a way of thinking rather than simply an overlapping of curriculum. Perkins and Salomon (1984) utilize the term "transfer" to describe this way of thinking. They distinguish between "learning" and "transfer". "Learning" is characterized by the ability of the student to demonstrate performance in a context that is more or less the same as the learning situation. "Transfer" takes place when the student is able to apply knowledge acquired to different situations.

A classical example of learning without transfer is often seen in Hebrew language instruction. Parents often wonder how their children could have received good grades in Hebrew language for 12 years and still be unable to function in a Hebrew-speaking society. In all likelihood, the children's instruction and assessment remained within the context of the classroom. As a result, they are unable to transfer their knowledge of Hebrew to other contexts.

The following three exercises represent different levels of learning and transfer for children who are learning multiplication tables in the study of mathematics:

(1) 6 x 8 =
(2) If an apple costs 8 cents, how much would it cost to buy 6 apples?
(3) How far would a car travelling 60 miles per hour travel in 8 hours?

The child who can only answer the first question has learned the material, but has not demonstrated transfer. The student who is able to answer the second question demonstrates a certain level of transfer. Mastery of the third question reflects an even greater degree of transfer.

As this example illustrates, the levels of transfer achieved in given learning situations can vary. Perkins and Saloman (1984) have identified two typologies of transfer, "low road transfer" and "high road transfer". Low road transfer involves spontaneous, automatic transfer of highly practiced skills with little need for reflective thinking. High road transfer involves an explicit formulation of abstraction in one situation that enables making a connection to another context. These authors make a further distinction in high road transfer between "forward reaching transfer" and "backward reaching transfer". In forward reaching transfer, abstractions are formulated in the initial learning that allows for future application. In backward reaching transfer, students formulate an abstraction guiding their reaching back to past experience for relevant connections.

With this model in mind, we can better understand Fogarty's assertion that integration can take place within one discipline. For example, Talmud study by itself provides an excellent opportunity for promoting high road transfer. The Gemara often gives the student a dispute in a legal case and then tries to abstract the principle behind the dispute. Theories are tested by application to other cases. Similarly, in geography, the student may be encouraged to apply concepts from the study of the development of a city in ancient times to the study of a more modern city. Conversely, our understanding of the concept of transfer can also help to explain the failure of many attempts at interdisciplinary integration. Simply reading The Giving Tree or studying a science unit on trees in conjunction with Tu Bishvat does not ensure that high road transfer takes place. As Brophy and Alleman (1991) assert, "An activity is appropriate because it promotes progress toward significant educational goals, not merely because it cuts across subject-matter lines."

CAN INTEGRATION BE TAUGHT?

According to Perkins and Salomon (1984), teachers can foster or hinder transfer in their instruction. A focus on content oriented questions and analysis tends to thwart the process of transfer. Transfer, however, can be encouraged through processes that the authors (1988) refer to as "hugging" and "bridging". Hugging is a method of fostering low road transfer. In hugging, teachers present material in a manner that creates resemblance conditions leading to a similarity of context.

Thus, if teachers wants students to transfer concepts learned in biology to ecology, they will frame the ecology lesson in a way that accents the contextual similarity. Bridging is a technique that encourages high road transfer. In bridging, the teacher mediates the desired processes of abstraction and connection making. For example, a social studies teacher might ask students what factors provoked World War I and where such factors are now operating in the world. Perkins and Salomon (1988) contend that these methods can do much to foster transfer in the instructional setting when used persistently and systematically.

IS INTERDISCIPLINARY INTEGRATION DESIRABLE?

There are those who question whether it is, in fact, advisable to engage in interdisciplinary integration in our schools. From a Jewish perspective, we find a hesitancy, even among those who advocate the concept of Torah Umada, the integration of Torah and general studies. In his address to alumni of Yeshiva University on the school's fiftieth anniversary, Dr. Norman Lamm, president of the university, quoted his predecessor, Dr. Samuel Belkin: "Our job is to give the students the material; their job is to let the materials interact within their minds." Apparently, the bastion of the Torah Umada philosophy advocates a student-based integration facilitated by the presentation of parallel tracks without mediation. Interestingly, Howard Gardner has also expressed reservations about interdisciplinary instruction (Gardner, 1999).

To use the word interdisciplinary, one must show that particular disciplines have been mastered and appropriately joined. Such interdisciplinary synthesis is simply not feasible for most youngsters during the middle years of childhood, or for most of their teachers. Rather, I see most so-called interdisciplinary curricula as commonsense or proto-disciplinary activities. Instead of drawing on or preparing disciplined thinking, these approaches tend to ignore the pre-or proto-disciplinary distinctions that young children are becoming able to master.

While Gardner does not negate that "interdisciplinary" curricula may have some other value, he does assert that, at least prior to high school, they do not promote interdisciplinary thinking, and may in fact ultimately hamper such thinking by weakening mastery of specific disciplines. Gardner states a further reservation regarding the inability of many teachers to actually facilitate interdisciplinary study. These comments might be construed to support the compartmentalized approach reflected at Yeshiva University and many day schools. They could also be used to support the use of student based integration models that fall into Fogarty's third category, "integration within and across learners".

Yet, Bieler suggests that integrating Jewish and general studies may have another important goal. He quotes Heilman's assertion that compartmentalization often entails not only separation, but also devaluation of at least one of the elements being kept apart from the other (Heilman, 1978). If so, then departmentalization in the day school will often lead to the devaluation of either the Jewish studies component or the general studies component, undermining the goal of creating students with integrated world views who can live holistically as Jews in the modern world. On the contrary, Bieler claims that such departmentalization creates a dissonance for learners that may lead to an active or passive disregard of one of the two worlds in which the school wants them to live. Thus, schools that wish to foster integrated world views must seek ways of overcoming compartmentalization within the given limitations.

4

Basic Principles of Teaching

In his classic handbook, Teaching Tips, Wilbert McKeachie notes that the unpredictability of teaching both frustrates and fascinates college instructors. You cannot anticipate every eventuality or problem that may pop up during a semester. Understanding and applying a few basic principles of teaching, however, not only will enhance student learning but also make your life as a teacher more rewarding and fun.

RHYTHMS OF THE SEMESTER

Much like the rise and fall of the plot in a novel, semester courses unfold in an arc of development. After the flush of excitement during the first week of class, students and instructors begin to settle into more of a routine. When you think of your own undergraduate courses, you'll recall a definite rhythm to the semester—a brief "honeymoon" period at the beginning when everything seems fresh and exciting; a longer span when students and instructors get to know each other and start establishing patterns of interaction; a stretch about three-quarters of the way into the semester when everyone seems concerned about deadlines, stressed, and, perhaps, ready for a break; and a few weeks before the semester ends, the final push, accompanied, we hope, by a sense of accomplishment.

If you recognize these rhythms, you can design lecture materials, readings, and assignments to fit well with student learning needs at particular points along the continuum. Scheduling all the "fun" learning activities during the first few weeks of the course probably isn't a good idea. On the other hand, waiting until the end of the semester to incorporate "fun" learning might send the message that you've "given up" on helping students work through the final, challenging push of the semester.

KEEPING STUDENTS ENGAGED

One of the tenets of American education is that students learn and retain information and skills better if they are actively involved in the learning process. Explain to your students that you expect them to prepare for class, think carefully about course content, take intellectual risks, and participate in class discussion. It is their responsibility to wrestle with the issues and concepts explored in the course; it is your responsibility to support their active involvement with the subject matter. You do this not so much by providing answers as by posing excellent questions. A substantial literature exists on how students learn and how best to engage them in the learning process. Here are a few tips; many more are available in the Center for Teaching library and online resources.

Lecturing

- If you lecture, remember that research has shown most people actively listen for about 20 minutes. Plan your session accordingly with a break for small-group work, Q&A, or other active learning before resuming the lecture.
- Try to leave the lectern now and then. Walking "into the crowd" will help you make eye contact with students and keep them alert and curious about what you might do next.
- Vary the tone and rhythm of your voice. Use body language effectively.
- Define new vocabulary several times. Avoid jargon.
- Refer to and expand upon material presented in the textbook—don't repeat it.
- Use technology—PowerPoint, film clips, student response systems ("clickers"), tablet PCs, etc.—effectively.
- Speak clearly and at a moderate pace.
- Summarize major points.

Active Learning

- usually involves students in more than listening;
- entails less emphasis on transmitting information and more on developing students' learning and discipline-based skills;
- engages students in higher-order thinking skills such as analysis, synthesis, and evaluation;
- encourages students to explore their own attitudes and values; and
- does not mean you must abandon the lecture format, which is one of several effective ways to convey information.

Active Learning Techniques

- Small-group activities encourage many more students to speak in class. It's harder to be a passive learner in a group of three than in a group of thirty. Small-group activities can be done even in classes of 500 students. All it takes is about five minutes and a well thought-out question or task for groups to work on.
- Effective use of teaching technology can present visual representations via PowerPoint, overhead projectors, videotapes, and tablet PCs. The

Center for Teaching and Campus Technology Services can help you incorporate technology in ways that enhance learning and recall of course content and skills.

- Minute papers are easy, fun, and adaptable to many purposes. The goal of this exercise— which can take no more than a minute—is to gather feedback. Minute papers can help you discover what did or did not work well, as well as provide ideas about how to teach in new ways. It can be used in any size class.
- If you are trying to gather general information about what interests or confuses the students or what they think of your teaching, the feedback should be anonymous. Occasionally, you may want to just use the minute paper as a quiz; in that case, of course, names are necessary. Students write for a brief time in response to a focused question from the instructor.

Here are a few examples:

- What is the most important point you've learned in today's class (or this week's readings, this unit, etc.)?
- Did anything confuse you during today's discussion? If so, write it as a question or two.
- What has been the most effective teaching technique used during this unit?

You can do this exercise at any point during the class session, although most instructors do it at the end of a unit or the period. After you've looked through the responses, let students know one or two things you learned and how that information will affect the course.

Students are glad to have an opportunity to express themselves in a way that has an impact on their learning in the course.

- Surveys can be conducted several ways, including electronic student response systems ("clickers") and minute papers, anonymous or not. Another effective way to survey students about their opinions or responses to a question is to have them line up along a continuum, discuss their choices, and then ask them to realign themselves along the continuum. If anyone has changed his or her place, ask them to explain why.
- A combination of small-group activities and surveys works well when each group holds up a card to indicate its choice of several answer options. Groups then defend their choices and try to convince others to "join" them.
- Allowing students to jot down a few thoughts before discussing in class can improve the depth of discussion and help those who feel shy about speaking off-the-cuff.
- Board work, role-playing, panel discussions, case studies, posters, and projects also actively engage students by enlisting the fully panoply of learning styles (visual, auditory, reading/writing, and kinesthetic).

WRITING

Writing demands critical thinking, organizational skills, patience, and the ability to critique others and to listen to criticism. It's a truism—but also true—that the act of writing forces us to construct our understanding of a topic—in other words, to create as well as to convey meaning.

Writing is one of the essential skills that defines an educated individual, yet teaching writing seems to be the juggernaut of many an otherwise gifted teacher.

The following ideas about teaching writing might smooth your way:

- Make writing a regular part of the classroom experience. One-minute papers work well. They can be anonymous or signed. You also can invite students to read aloud what they've written.
- Think carefully about the purpose of the writing assignment:
  - To demonstrate learned knowledge (a quiz or test);
  - To show research abilities—analysis, synthesis, evaluation (term paper);
  - To wrestle with an idea (short essay);
  - To help students speak aloud or focus class discussion (one-minute paper);
  - To help students understand that writing improves thinking (expository writing);
  - To hone communication skills (series of drafts); or
  - To express feelings and opinions, and to reflect on what has been learned, how, and why (personal essay, reflection).
- Design the writing assignment with explicit questions and provide clear learning objectives.
- Invite students to reflect—in writing— on their writing process for any particular assignment and also across the semester.

Even veteran faculty members wonder how to assess written work. Instructors sometimes find assessing personal writing, such as essays or reflections, especially challenging. But simply because a written piece is personal or subjective does not mean it cannot be assessed. A few suggestions to help make assessment of writing effective for your students and efficient for you:

- Help students avoid the temptation to plagiarize by assigning a series of short exercises that build to the final paper or essay.
- Provide written comments in the margins. Marginalia need not be extensive, however, and if you have many students or many short assignments, you can rely on the "check, check-minus, check-plus" technique.
- Writing many comments such as "Good," "Weak," or "Confusing" probably helps the student less than fewer comments that are more specific as to why you find a sentence or paragraph good, weak, or confusing.
- One technique works especially well to start a conversation about written work. Rather than giving students grades for their first draft, ask them to read your comments and then respond. This assignment assures that they actually read and think about your comments. You also can have them rewrite certain sentences, paragraphs, or sections.

- Resist rewriting your students' work—you don't have time and they will not learn if you do the work for them.
- Grammatical errors should not be ignored. On the other hand, you should not serve as a copy editor for your students. Undoubtedly, they have been told about run-on sentences, "their" vs. "there," and misspelled words many times before. What to do?
  - — Put check marks in the margins and tell students to find and correct the errors on the marked lines.
  - — Mark and correct one paragraph and tell them to find identical errors and fix them in the rest of the piece.
  - — Tell students they will be exchanging papers for peer review of grammar and usage.
- Devote some time throughout the semester to teaching a few of the most frequent—and egregious—examples of bad grammar and usage. These exercises can be amusing, and students almost always appreciate learning or brushing up on a few basic writing skills.
- Develop and use a rubric for grading writing. Be sure to hand it out to students at the same time as you give them the assignment so they know what is expected of them. Writing assessment rubrics generally cover nuts-andbolts such as grammar and usage, but also include content, organization, critical thinking skills, and stylistic considerations.

SERVICE LEARNING

Today, many students come to college having already performed impressive volunteer work in their communities. They are eager to participate in volunteer and service-learning opportunities in college. Service-learning courses provide active learning experiences by integrating community service with academic course work. Service learning requires students to apply what they learn in class in their community service efforts and then bring their volunteer experiences to bear on their classroom learning. As a teaching assistant in a service-learning course, you may be helping the faculty instructor and students establish community partnerships. You also may be monitoring and helping to assess the service aspect of the course, and possibly even engaging in community service yourself.

Teaching in Laboratory or Studio Settings

- Students who take lab or studio courses necessarily engage in active learning. In these types of courses, teaching assistants work with students on a more individual basis. To enhance the lab or studio experience:
- Introduce the conceptual background for their activities in each session of the lab or studio.
- Inform them of what they are going to do and the learning objectives for the activities.

- Make certain you have already conducted the experiment, or, in a studio, are familiar with the materials and media being used. Point out where you had difficulties and how you resolved them.
- Circulate around the room as students work. Ask them what they're doing and why and to interpret their results.
- Ask them to link what they are doing at the moment to what has been learned in the classroom or through the textbook.
- Invite questions.
- Remind students about safety issues and where to find devices and individuals to help in an emergency.

TEACHING IN ART AND DESIGN

Virtually all new entrants to teaching are graduates. There are opportunities for adults with some higher education and industrial experience to undertake a shortened teacher training course.

TEACHING IN PRIMARY SCHOOLS

In primary schools, art, design and technology form an important part of the education of younger children. A member of staff with particular interest or expertise may organize this side of the school's work, but normally all teachers will contribute. Often, creative work is done as part of a project, rather than just as a subject labeled 'art', say. Much of the teacher's aim is to provide opportunities for children to experience different approaches to art, craft and design, using a variety of materials, in order to develop their creative and imaginative skills and their representation of ideas and feelings. In design and technology, teachers aim to create opportunities for children to develop their design and technology capability through designing and making use of a wide variety of materials. The national curriculum for art also requires that children should be introduced to the works of artists, craftspeople and designers.

Teaching in Secondary Schools

Teaching art and design in secondary schools is a job for specialists. Art is taught as a discrete subject to all pupils up to the age of fourteen in all secondary schools in England and Wales..&, a subject, it may be taught within a design or an expressive arts department. Pupils in secondary schools are introduced to a wide range of art and design techniques and methods, which may include sculpture, work in wood and metal, textiles, pottery, printing techniques and photography. Many older pupils will be working for GCSE and A level examinations in art and design. The department may also teach history of art for examination courses.

Teaching design and technology in secondary schools is likewise a job for specialists. The national curriculum lays down what pupils must study. Importance is placed on the teaching of design as a practical means of problem-solving. In schools, design and technology can be taught alongside art and craft

subjects, within the scope of science, or as its own subject area. Within a design department, there are likely to be teachers of art, of design technology and, often, of home economics perhaps including specialists in metal, wood, plastics, textiles and fashion, food and graphics.

Pupils in secondary schools are introduced to a wide range of skills and techniques associated with designing and making, and requiring knowledge of materials and processes. As well as practical and design work, the department may teach history of design, and theoretical principles of design for examination courses.

Teaching in Further and Higher Education

Lecturers must be competent and experienced artists or designers, with relevant technical or academic qualifications and some knowledge of industry. In the vocational areas of design (fashion, industrial, graphics, etc) they will have had a good range of commercial experience. Many lecturers combine their own creative work with part-time teaching. Unlike teachers in schools, they do not need to have undertaken teacher training, although increasingly this is expected. There are also limited opportunities for people to teach on teacher training courses. Wide range of art and design techniques and methods, which may include sculpture, work in wood and metal, textiles, pottery, printing techniques and photography. Many older pupils will be working for GCSE and A level examinations in art and design. The department may also teach history of art for examination courses.

What it Takes

Whilst ability in their specialist subject is naturally very important for intending teachers, being able to communicate ideas and enthusiasm to children is even more essential. Like all teachers, the teacher of art or D&T must be able to deal with unenthusiastic and difficult pupils as well as the keen ones. Most teachers in secondary schools are expected not only to teach their own subject, but also to take part in the general life of the school, probably acting as a group tutor, and teaching other subjects if required. Experienced and well-qualified school teachers may go on to be heads of department, subject advisers, teacher training lecturers, or school inspectors.

Getting Started in Teaching

Applications to some PGCE (postgraduate certificate in education) courses which specialise in art and design are dealt with through the Graduate Teacher Training Registry. It is sometimes possible to undertake a PGCE art and design course after a degree in a non-art subject, but only if you have considerable art and design experience.

Requirements for a degree in art and design subjects are either two or more A levels plus an art foundation course or an Advanced GNVQ qualification in Art and Design (or the equivalent).

THE ARTS ARE ESSENTIAL TO THE EDUCATION OF ALL STUDENTS

Dance, music, theatre, and visual arts are universal forms of human expression, and have been important in all societies throughout history. The arts belong to all of us, whether we are old or young, rich or poor. They enrich the lives of people of all races and ethnicities, they communicate to people who speak different languages, and they bring joy and personal growth into the lives of people of varying cognitive and physical abilities.8 If our students are to comprehend the human story, then they must have opportunities to learn about how men, women, and children all over the world and throughout the ages have expressed their ideas, feelings, and beliefs through the arts.

The students in Massachusetts classrooms today will take their place as workers and contributors in the twenty-first century. Whether or not they become involved in professional arts careers, students will be asked to provide creative solutions to the dilemmas of their working and professional lives. The Common Core of Learning affirms the creative process as the heart of arts education and provides a rationale for making the arts an indispensable element in the education of all students. The creative process unites the senses and the intellect and involves students in the task of making personal statements about the world and the human condition.

Because each individual has distinct experiences and perceives life differently, the practice of creating helps students understand and value diversity and different ways of thinking. The arts demand from learners a disciplined attitude towards the work of revising, refining, and rehearsing to attain an expressive statement.

The more deeply learners acquaint themselves with the history of the arts, the more they realize how artists have always posed eternal questions about values, emotions, and life experiences. When teachers give students an authentic introduction to the creative process, they invite students to contribute to this tradition of free discourse about the nature of the world and humanity's place within it.

STUDENTS EXERCISE AND DISPLAY MULTIPLE INTELLIGENCES THROUGH THE ARTS

Building on the work of educational psychologist Jean Piaget, Howard Gardner and his colleagues at Project Zero of the Harvard Graduate School of Education developed the theory of multiple intelligences. In Frames of Mind and subsequent books, Gardner proposes that there are seven types of intelligences.10

Multiple Intelligences

- Linguistic intelligence, related to words and language, and involved in imaginative writing such as poetry, fiction, and playmaking;
- Logical-mathematical intelligence, related to deductive reasoning, an affinity for numbers, and the ability to see fundamental patterns and structures in science and philosophy;

- Spatial intelligence, related to visualization and the capacity to create representations and structures in two- and three-dimensional space, and involved in visual art, architecture, dance, and theatre;
- Kinesthetic intelligence, characterized by a sensitivity to physical movement and trusting one's body to do things, and involved primarily in dance and theatre;
- Musical intelligence, related to the sensitivity to patterns of pitch and rhythm and involved primarily in music and dance;
- Interpersonal intelligence, related to a heightened awareness of human relationships and the ability to communicate effectively, and involved in all collaborative work in the arts; and
- Intrapersonal intelligence, characterized by an awareness of one's belief system and its effect on action, and involved in reflective processes in all the arts.

Teachers who look at students' performance through the lens of multiple intelligences theory say that they discover new ways of understanding student learning and behaviour. This in turn leads them to broaden their conception of their discipline and vary activities and assessments in their classes to appeal to the strengths of all learners.

An elementary music teacher, for example, who includes listening, composing, movement, discussion, writing, and visual art along with performance activities such as singing and playing instruments, is consciously using strategies to develop multiple intelligences in her students.

Because the arts emphasize a variety of ways to explore, learn, and communicate, the arts classroom offers many opportunities for students with special needs. The education and professional development of all arts teachers should include training in cognitive development and teaching strategies. To make the arts classroom a laboratory of planned and purposeful inclusion, administrators should ensure that arts teachers have the support and collaboration of special education staff, and that arts teachers have the opportunity to contribute their perspective to child study teams and students' individualized educational plans.

Active use of the theory of multiple intelligences supports more inclusive class-rooms by giving all students and teachers approaches to learning and presenting content. The photograph below shows Kindergartners in the midst of an interdisciplinary study of dinosaurs, interpreting their knowledge through movement. The same approach can be used in the later grades. When eighth graders collaborate on a multimedia social studies presentation, for example, students with strong musical and spatial intelligences make unique contributions to composing the aural and visual design of the presentation, while students with strong linguistic intelligence contribute research and scriptwriting. Projects such as these bring the classroom close to the world of work, where people with diverse training and intelligences collaborate to construct meaning or produce a product.

UNDERSTANDING OF HUMAN GROWTH AND DEVELOPMENT SHAPES EFFECTIVE ARTS CURRICULUM, INSTRUCTION, AND ASSESSMENT

The Young Learner as Explorer in the Arts

The goal of arts education from preschool to grade four is to develop the natural expressiveness and uninhibited creativity that very young children often display. Arts education begins with an appropriate foundation in a child's early years. Such a foundation recognizes that exploration and understanding of the arts are accomplished through the medium of play. The essential way of interacting with media, people, and the general environment may never again be as sensory-based as it is in these years. It is crucial, therefore, that engagement in the arts for this age group be exploratory and playful.

Young children use the arts to explore sensation and recreate their memory of real and imagined events. As learners, they are trying to find out all they can about the expressive qualities inherent in different forms of communication. Through what they choose to dramatize, sing, or paint, children let others know what is important, trivial, appealing, or frightening in their lives. Because arts experiences allow children to play with ideas and concepts, students often express freely in their artwork ideas and understandings that do not emerge in other classroom work. Versatile teachers encourage many forms of expression and learn how to read, interpret, and appreciate the messages children transmit through their artworks.

Art teacher Ms. Washington has been working with Mr. Krantz's third grade to develop characters for a puppet play. Mr. Krantz has noticed that the project has led students to collaborate, and has been helpful in bringing out some of the quieter children. Seth, for instance, is an inquisitive child, but Mr. Krantz can't recall Seth saying more than ten consecutive words at a given time. As most of the class worked together writing roles for their puppet characters, Seth stayed alone, totally engaged in making his puppet, rocking back and forth. All at once, he began using a voice no one had heard before as he improvised a story for the puppet he had created. "I'm the captain of this ship, and I'll fly up to the sky if I want to!" The class was quiet as Seth continued to weave his story of a ship captain so self-confident that he could make his ship fly around the world. As he conferred with Ms. Washington later that day, Mr. Krantz exulted about the tremendous progress Seth had made, seemingly in one leap. "I've often wondered what he thinks about. He seems comfortable, but so rarely interacts with anyone else. Now I want to try getting him to work with a group in social studies by using masks and period costumes. Could you work with me on a project like that?" As they observe and document children's artistic responses, teachers become attuned to ways in which children demonstrate their intelligences. By the end of the fourth grade, teachers who have helped students assemble cumulative portfolios of selected work from each year of elementary school have a wealth of evidence about a child's profile of intelligences and emerging artistic preferences and strengths.

The Late Elementary and Middle School Years: Learning to Make Connections through the Arts

As children mature, they absorb the adult world's definitions of each of the arts as a distinct discipline containing a specialized body of knowledge. They are eager for mastery, often impatient with their own efforts. Resourceful teachers help students identify the art forms that interest them the most. Teachers and students then together can capitalize on those interests by pursuing projects that foster understanding of the essential skills and broad dimensions of a discipline.

Twelve-year-old Paul has taken instrumental lessons since he was in second grade. He began by playing the family piano, and in third grade started group violin lessons in school. A member of Mr. Read's middle school orchestra, Paul's most prized possession is his new violin, and he spends hours after school and on weekends practicing and rehearsing. Paul's parents confide to Mr. Read their concern that their son's grades will slip because he spends so much time practicing. Mr. Read knows that Paul's least favourite subject is science, but he suspects that Paul could become more interested in that subject if he could see the connection with music. He also knows that the science teacher, Mr. Borges, plays the cello. In their team planning time, the two teachers discuss the issue, and when the time comes for independent science projects, Mr. Borges suggests that Paul investigate how stringed instruments produce sound, and introduces him to a graduate student who makes new violins and restores old ones. Spurred by this personal attention, Paul researches and presents a science project that both Mr. Borges and Mr. Read consider outstanding. As part of his presentation, he plays his violin for the class; for his violin recital, he writes programme notes on the history and science of the stringed instruments.

Paul is an example of a student who has, to paraphrase the words of the Common Core of Learning, acquired and applied essential skills and knowledge in music. Because Mr. Borges took the time to find out about Paul's interests, he played a powerful role in helping him integrate his knowledge of music and science, and communicate his new knowledge to others. In a school where documenting student work is the norm, excerpts from Paul's practice sessions, recital, and his science project would be preserved and documented as evidence of his learning.

The High School and Adult Learner in the Arts: Developing a Sense of Discipline and a Sense of Self

Whatever their previous training or level of expertise in the arts, adolescents search for ways to communicate personal and original ideas. Performing, creating, and responding to the arts at the high school level demands hard work, and at the same time offers students the satisfaction of sharing their ideas and talents with the school community. They are able to reflect on their progress, revise work to refine its expressive qualities and look inward to try to understand

themselves better. High school students have the maturity to consider the role of the artist in society as both an innovator and a preserver of tradition and to make explicit the links between their own ideas and the ideas of generations of artists who have come before them.

"What I did here," explains Maria, a high school senior, as she points to a complex pattern on the computer screen, "is scan in a weaving that my mother brought with us when we moved here from Guatemala two years ago. The cloth is very old, and the people in our village have been weaving these patterns for centuries. Each design has a meaning. "And now," she moves the cursor across the screen, "here are photos of my relatives. Here's my mother when she was my age, and her mother, and that's me in front. I'm trying to compose a picture of all of us, three generations, with the designs in the cloth as a unifying element." "This is my second art class. Last year in the introductory class we analyzed Surrealist paintings and collages, and how those artists distorted reality. I'm combining images here, but I'm not trying to make a picture that makes you feel strange the way the Surrealists did. I'm trying to make people see that even if we live in the United States, my family's roots are in Guatemala and that culture is still important to us. What I like about using the computer is being able to play with the sizes, shapes and colours of things. For instance, I can make myself look transparent and ghostly here and my grandmother look solid and real."

The end of high school is just the beginning of a lifetime of learning. High school students bring what they have learned in, about, and through the arts to their adult lives.

COMPREHENSIVE AND SEQUENTIAL ARTS EXPERIENCES THAT BEGIN IN PRESCHOOL AND CONTINUE THROUGHOUT HIGH SCHOOL PROVIDE THE FOUNDATION FOR LIFELONG LEARNING IN THE ARTS

In order to build a knowledge base in the arts, students need repeated exposure to processes, content, concepts, and questions, and the opportunity to solve increasingly challenging problems as their skills grow. This sequential form of instruction is often referred to as a "spiraling" approach to curriculum.

Comprehensive arts programmes at all levels integrate the components that comprise the Strands of this Framework:

- Creating and Performing,
- Thinking and Responding, and
- Connecting and Contributing.

Structured acquisition of knowledge, practice, and problem-solving in dance, music, theatre, or visual arts results in the ability to understand, appreciate, perform, or create in these disciplines, a combination of skills sometimes called "arts literacy." Sequential learning in the arts is also important as a way of reaching all learners and affording them the opportunity to communicate what they know through the arts in all disciplines.

Implementation of the Arts Framework, and the PreK to grade twelve articulation it implies, will require restructuring in many districts. Many Massachusetts arts programmes are severely understaffed, particularly at the elementary level. Although most districts provide arts education through middle or junior high school, continuity after grade eight is sporadic, since arts courses are usually electives, rather than part of a required programme. The goal of providing equitable access to sequential arts education for all students from PreK through grade twelve should guide policy-makers, parents, school council members, and school faculties as they plan schools for the twenty-first century.

COMPREHENSIVE AND SEQUENTIAL ARTS PROGRAMMES ENCOURAGE LEARNERS TO MAKE MULTICULTURAL AND INTERDISCIPLINARY CONNECTIONS

Teacher or student, we all belong to several cultures defined in part by our ethnicity, nationality, regional background, religion, gender, age, and sexual orientation. We carry messages within us from our lands of origin, and bring these into classrooms across the Commonwealth, where according to a recent Massachusetts Department of Elementary and Secondary Education study, as many as forty-five different languages may be spoken.19 As learners seek to know one another better, they find that the arts communicate eloquently. There are many times in the classroom when students learn more readily about an ethnic group from participating in its dances than from reading about its history.

In planning a residency involving schools and colleges in several Berkshire County communities, members of an Asian-American dance group ask residents about the history of Asian immigrants in the area. A local historical society supplies primary documents of the following incident: during a strike in North Adams shoe mills in the 1870s, Chinese workers who had built the intercontinental railroad were brought in as strikebreakers. As they explore the dramatic conflict and social dimensions of this nineteenth century interaction of cultures, the dancers and teachers have the help of local author, Judith Weber, whose children's book, Forbidden Friendship, is a fictional account of how a minister's daughter tutored a young Chinese man. The dance group uses the story as inspiration for Hidden Voices, a work which they rehearse and perform with middle school students in the college theatre. Throughout the creation and performance of the work, college dance students work with middle schoolers to refine and document the work in progress.

The historical and cultural content of arts education, then, goes beyond the study of isolated "great works" of dance, music, theatre, and visual arts history. Students need to explore how and why art forms develop in specific cultural, historical, political, and environmental contexts, and to consider the ways in which attitudes towards tradition and innovation influence the artist.

Teaching that integrates a multicultural perspective is by nature interdisciplinary. An important aspect of education reform is the search for ways to build bridges connecting the disciplines. Because the arts focus on the creative process, they

offer unique possibilities for building those bridges, and for encouraging collaboration among teachers.20 Interdisciplinary teaching and learning is based upon a philosophy of education that emphasizes the exploration and discovery of analogies, relationships, and metaphors. It requires students and teachers to apply the process of enquiry and integrate specific disciplinary skills and knowledge into a broad context. Innovative interdisciplinary teaching begins with questions, unites teachers and students as learners and investigators, and often makes innovative use of community resources.

Authentic Assessment in the Arts is Designed to Demonstrate what Students Know and can do; it Provides a Model for Assessing all Complex Learning

The purpose of classroom assessment is to help students evaluate and improve their work. Informal assessment is part of artistic decision-making, and happens spontaneously dozens of times a day in arts classrooms when teachers and students discuss and critique work. Educational researchers and practitioners who value the practice of critique believe that multiple-choice tests provide a limited measure of student learning; they advocate forms of observation, documentation, and evaluation known as "authentic assessment."21

Portfolio assessments, performance assessments, and exhibitions formalize this critique process, requiring students to demonstrate their skills by working directly within a discipline, in addition to analyzing and evaluating their work orally or in writing. Arts educators who use these forms of assessment speak of developing a "portfolio culture" in the classroom. They involve students in the discussion of important dimensions of a project, and the development of criteria by which work will be evaluated. Criteria that are organized into increasing levels of achievement are known as scoring guides or rubrics.

Portfolio Assessment

Much of the early work in portfolio and performance assessment began in the mid 1980s at Project Zero, a Harvard University research group specializing in the study of cognitive development.22 A key element of the portfolio approach is the documentation of emerging ideas. Portfolios contain not just finished or "best" work, but also recordings of rehearsals, early sketches and drafts, and student journals. Periodically, students evaluate their own work as they review portfolios with their teachers. Students who keep portfolios and reflective journals discover that rehearsal and revision—the practice of creating—is central to the creative process. In her journal, Allison, a high school dance student writes:

"In dance class, I've learned to work in a group. It isn't always about individual achievement as it is in most of my academic classes. Because we work together to do one dance, other people's performance affects mine, and mine affects the class's. I've learned a lot about mental flexibility that can help me outside of school. To me, being flexible in a dance is being openminded to new styles.

Flexibility also includes being patient, not becoming frustrated or angry right away. It is important to persevere and be determined in order to really learn the technique rather than having your body just memorize the movements. And, of course, this is true for anything."

Reflecting on the hours spent in the dance studio perfecting a movement or in the darkroom printing variations of a photograph teaches students to see themselves as purposeful people who are accountable for the outcome of their ideas and labors. Teachers who use portfolios as an assessment tool factor a student's persistence in pursuit of a problem into an overall grade or narrative evaluation.

Performance Assessment

In contrast to the cumulative nature of portfolios, performance assessments focus on how students go about solving specific artistic tasks. A performance assessment in instrumental music, for example, might ask students to sight-read an unfamiliar score, perform it several times, and reflect in writing about how their performance changed from the first to the last performance. Students in several schools could work on the same task simultaneously, their work providing a basis for comparison by teams of teacher/reviewers. Because performance assessments ask all students to accomplish a similar task, they are appropriate for large-scale evaluation purposes in contrasting student achievement across schools or districts.

Exhibitions of learning require students to synthesize and present knowledge from a variety of sources. In visual arts, "exhibition" commonly means a showing of work. Some teachers of visual arts at the high school level ask students who have taken several visual arts courses to create annotated retrospective exhibitions of their work as a form of assessment. In any of the arts, an exhibition of learning can also take the form of a lecture/demonstration in which students present a project involving both creative and research work, discuss its evolution, and defend their artistic choices.

Evaluating a student's ability to create, perform, and respond in the arts requires clear criteria for rating levels of performance. As the National Standards for the Arts were developed in the early 1990s, the College Board, working with a consortium of arts educators and assessment specialists, began to develop performance assessment tasks and scoring guides to be used in the 1996 National Assessment of Educational Progress (NAEP) in the arts.24 This work describes the characteristics of increasing levels of performance in each arts discipline at grades four, eight, and twelve. For example, this group defined levels for creating in dance at grade four; an excerpt of this work is in the table below.

Teachers can use broad guidelines such as these to develop more detailed scoring guides, or rubrics, with additional levels for specific performance assessment tasks. Realizing the importance of achieving consensus on the definitions of achievement levels in creative work, the professional arts education organizations and state departments of education have collaborative research

and development projects in which teachers can participate in designing and piloting tasks, reviewing student work, and refining scoring criteria.

In schools, teachers and students can follow a similar process in developing performance standards collaboratively, and keeping them posted so that students are aware of what it means to perform to a high standard. It is also important for teachers at a grade level to work collaboratively in rating student work, so that they can clarify their expectations and come to agreement about what high quality work looks like. For example, several elementary schools (or districts) and a university might form a teacher/researcher study group in which arts and classroom teachers agree to pilot a specific visual arts lesson, such as a watercolour still life, then review and score student work from several classrooms together. This kind of professional development in arts assessment provides opportunities for interaction among teachers offering them useful perspectives on improving their curricula, instructional strategies, and overall arts programmes. It translates the theories of authentic assessment into practical resources that many teachers can use and apply.

TEACHING DEVELOPMENT

Whilst in this light the place of developmental psychology seems assured in the student teacher's curriculum, there are many problems in translating from the essentially descriptive findings of psychology to the prescriptive business of education. These issues have long been recognised but have rarely been given the exhaustive treatment they merit before being used in teacher education (Desforges 1981).

The first thing that must be established is the quality of the informing psychological theory. If educational practices are genuinely to be founded on psychology, then the theory must be sound. Munsterberg (1912:94) observed: 'There is nothing more reckless than to take fragments of an unsafe new doctrine and turn them into practical remedies.' Piaget emphasised the importance of resting educational principles, said to emanate from child study, on scientifically valid foundations. Whilst recognising some consonance between his educational principles and those of Rousseau, Piaget none the less emphasised that Rousseau's view was '...no more than a sociological belie for a polemical weapon...' (1971 a: 140) and that 'what Rousseau lacked in order to constitute a science of education was a psychology of mental development' (p. 141). It is the claim to scientific validity which underpins the developmentalist's right to a hearing on educational matters.

Unfortunately, there is no body of developmental theory which is not open to fundamental reservation. For example, extensive criticisms of Piaget's theory are available. The flaws have been considered to be of such magnitude that it has been thought premature and misleading to apply Piaget's theory to education. Piaget's theory dominates contemporary developmental studies and, since 'new doctrines' have yet to emerge from his critics, this must provoke considerable caution in applications of his work.

Since it is in the nature of science to contest theories, this could lead to a complete embargo on the educational applications of much developmental theory. As a way of avoiding this conclusion, it has been suggested (Hilgard 1964) that educators are practical people who must deal with facts and that conflicting theories are rarely about facts, but about interpretations of facts. So long as theoreticians agree on the facts, then the practitioner can work on the basis of secure knowledge. 'Whilst eventually the correct interpretation might make some difference, it often makes little difference at the present stage of technology.' (Hilgard 1964:403) Thus navigators do not suspend their calculations whilst they await the resolution of theoretical debates about the origins of the universe. Although the above example is an impeccable instance of Hilgard's view on the practical utility of contested theory, it might not be applicable to conflicts in contemporary social science. For one thing, educational prescriptions rarely arise from the notional facts of a body of knowledge.

Rather, they arise from interpretations. The educational prescriptions emanating from Piaget's work do not arise from the largely uncontested facts that, at particular ages, most children fail specific archetypal tasks. On the contrary, the prescriptions arise precisely from Piaget's contested interpretations of his observations. For example, Piaget's critics confirm his observations that children under the age of seven typically respond differently from adults on the whole range of tasks known in Piagetian terms as 'tests of conservation'. Piaget's interpretation is that these children lack the internalised operation of conservation and this is taken to be just one symptom of their being 'pre-operational'. From this it has been argued that for such children the curriculum should be dominated by direct sensory experience. However, Piaget's critics—whilst endorsing his observations—reject the interpretation. Children's performance limitations on these tasks have been variously attributed to memory limitations (Case 1974), the level of experience with specific task content (Engelman 1971) or inexperience in interpreting the social demands of the task. Some of these interpretations have been associated with educational prescriptions at odds with the Piagetian approach. These authors do not assume that young children lack logical operations and do not limit pedagogies to direct sensory experience as *the* essential educational medium for young children.

Rather than searching for a solution to the problems of contested or condemned theory, as a basis for educational innovation, both psychologists and educationalists have tended to ignore the issues. For example, whilst Skinner's theory of language development was criticised by Chomsky (1959) and, whilst behaviourism generally has been criticised as naive in cognitive terms (Broadbent 1958) and untenable epistemologically (Piaget 1971b), both find extensive use in contemporary educational practice and teacher education syllabuses.

Whatever the quality of particular theories, there remains the overriding and general problem of the nature of the link between schooling and developmental studies. Piaget (1971:145) asserted: 'That schooling should be adapted to the

child is something that everyone has constantly urged.' This is simply not true. It is safer to say that no one has argued that schooling should be deliberately maladapted to the child. The practicalities of avoiding such maladaption depend, in general terms, on what the nature of child development is taken to be.

For those theorists who believe that development is merely the associative products of learning, there are no special assumptions in applying developmental psychology to schooling. Special assumptions become necessary only when the claim is made that there is a natural course to human development or that there are natural limitations to human learning at certain stages. This claim is often advanced and, since it takes a variety of forms, it is necessary to examine its implications.

Taken at its most general, the view of the superiority of natural propensities is well expressed by Smith (1975:2) who asserts that children know how to learn and that 'A fundamental problem for any instructor is to avoid interfering with natural processes of comprehension and learning.' The educational implication of this is that 'There is only one reliable way to improve instruction, and that is to assist the instructor in understanding children.¼' (p. 245) A similar view is often deployed by popularisers of Piaget's work. Occasionally, a debilitating natural decline is posited. Bereiter and Scardamalia (1977), for example, have taken the view that there is a natural decline in spontaneous curiosity. In establishing the educational relevance of such views, it is necessary to ask whether the postulated 'natural processes' are indeed natural or whether they are themselves the products of schooling, or the knock-on effects of schooling mediated by parents.

Even if a natural order were established, its application to instruction depends on whether Nature were to be considered ideal, less than ideal, or simply immutable. It is interesting that Smith (1975) views children's natural ways of knowing as self-evident and good, whilst Bereiter and Scardamalia (1977) view children's natural decline in curiosity as simply an immutable fact.

It is clear that divining educational implications from developmental studies involves value judgements on whether natural development (when established) should set the limits to which schooling might aspire.

There is a third stance on the form of development and its limitations which has its origins neither in an appeal to the superiority of Nature nor, initially at least, in the analysis of psychological processes.

This is the stance initiated by Piaget. Arising from his rejection, on epistemological grounds, of empiricism and rationalism as accounts of the growth of understanding and his adoption of a constructivist stance, Piaget's view of the impact of experience on the processes of equilibration was that it necessarily yielded cognitive structures of particular and temporarily limiting forms. Piaget's view of development is thus not based on a naive view of the wisdom or otherwise of Nature. He observed...let there be no misunderstanding. Memory, passive obedience, imitation of the adult, and the receptive factors in general are all as natural to the child as spontaneous activity.' (1971 a: 137-8)

Piaget's theory has had enormous prominence in teacher education. This is not the place to describe or evaluate the work. The concern here is to raise, in principle, the kinds of problems peculiar to the application of Piaget's work to schooling, and hence to evaluate its place in teacher education.

Instructional implications have been taken to arise from the functional aspect of the theory (that is the description of the dynamics of development) and from the formal aspect of the theory (that is the description of the sequential stages of underlying competence).

Piaget's view of the dynamics of development (most notably his conception of equilibration) arises out of his position as a constructivist. Before applying this notion to education, it would be necessary to be convinced on epistemological grounds of the necessity of adopting this model. Piaget's own view was that equilibration was an unnecessary concept when contemplating teaching school subjects...whose contents have been invented or even developed by adults' (1971 a: 26).

However, there are some school subjects whose contents depend more on a process of research and discovery during the course of which the human intelligence affirms its own existence (1971a: 26). In these latter subjects, and Piaget quoted physics and mathematics as examples, the operation of the learner's own processes of equilibration were considered crucial.

In applying the stage model to education, different problems are met. The validity of the model would have to be established. This is extremely difficult since the theory is one of underlying competence. Even if the theory were considered valid, there are massive technical problems in translating descriptions of competence into taxonomies for analysing children's available structures (as revealed by their task-specific performances) and related taxonomies for sequencing curriculum tasks. Considerable effort has been put into such work (Shayer and Adey 1981) but the fundamental issues set out above seem to have been totally ignored (Desforges 1981).

TEACHING THE LANGUAGE ARTS

The new English teacher who works diligently at his craft may see more real achievement in a year than will teachers in most other fields. Blessed by acquaintance with the world's great literature, the teacher of the English language arts is privileged to open the minds of his students to exciting new experiences. But even as he reads aloud, encourages his learners to read for themselves, or avails himself of the recorded voices of great actors and transports his students into worlds beyond the classroom, so also must he grub regularly at spelling-words, misplaced modifiers, and the mechanics of expression. He might be convinced completely that great literature will "humanize" youngsters of diverse origins and motivations; he also should know that it is his task to eliminate gross language errors, to help his students learn to write cogently, to build their vocabularies, and to heighten their sensitivity to appropriate language usage. Similarly will the foreign language teacher know reward and dismay as he

endeavours to add another language to the imperfectly mastered mother tongue. Dedication to duty thus identifies these teachers, and it must, for perhaps in no other field are student deficiencies so readily criticized.

While there are countless definitions of language and no end to the possible functions to be served by language study, a good summary statement compressing the purposes of the English language arts is that developed by the National Council of Teachers of English. The Council has stressed four main purposes: to help students to read thoughtfully, listen intelligently, express themselves effectively, and to think critically. More recently, the Council has urged that bold and direct action be undertaken nationally in order that the teaching of English focus upon the study of language, literature, and composition. Its militant *The National Interest and the Teaching of English* insists that competence in English is essential to successful study of every other subject field, and to most trades and professions, and further that "English encompasses much of our children's introduction to a cultivated understanding of themselves and other human beings, their grasp of lasting human values in an increasingly machine-dominated society.'

Within the English language arts usually are included the subfields of written and oral expression, spelling, listening, vocabulary, literature, grammar reading machanics, usage, and, for want of a better niche, handwriting. For purposes of this chapter, the teaching of foreign languages also is included as an this chapter, related field.

Eligibilities of Teachers: Since language is universal to all human commerce, the language teacher ideally and necessarily might well be the most efficient, skilled, and learned member of the faculty. That the teaching of the language arts is difficult and demanding is evidenced by the serious shortage of English teachers and foreign language teachers in the secondary schools. The language teacher may be almost alone in insisting upon precision in speech and writing; in some schools, he may be without vigorous support in his battle against slovenliness, provincialism, and the picture-book. English teachers must be competent in their own language skills if they are to serve as models, and they must be inventive, pliant, and persistent if they are to know success.

Close acquaintance with notable literary works is necessary. But also demanded are experience and talents in some particular adjuncts of language study: dramatics, journalism, forensics, remedial reading, creative writing. For placement purposes, future teachers should be prepared to declare interest and ability in directing one or more of these activities. Generally, the smaller the school the more diverse the teaching assignment.

The English teacher should have an A.B. degree with a "major" in English. Foreign language and social science are the two more probably useful and frequently encountered "minor" teaching fields for English teachers. In his fifth year of preparation, the candidate should have taken at least two seminars in literature to gain some perception of the depths of scholarship and also should have overcome any apparent deficiency in the allied fields as listed above. It is

the English teacher's task to heighten awareness of the economy of thought and beauty of expression in poetry. It is his responsibility to elevate literary tastes, improve expression, raise spelling and reading proficiencies, and enlarge student vocabularies. He cannot do these all alone; but if he does these not at all, by whom will the work be done?

Nature of Students Enrolled: All students in the secondary school enrol for courses in "English' or subfields involving the regular use and planned improvement of language skills. Most schools require enrolment for three years study and increasingly schools are insisting upon four full years of language from the ninth through the twelfth years. With students of all abilities registered, grouping becomes common practice in many schools. Particularly is grouping favoured under the newer flexible teaching schedules as popularized by the National Association of Secondary School principals. Three-track systems are most frequently encountered, while some larger schools supplement this scheme with additional sections for the slowest learners and the truly gifted. Classifications in these grouping procedures usually are made on the basis of standardized reading and language tests, teachers' recommendations, and measured intelligence. Provision also is made for students to move from one classification to another on the basis of performance, although careful initial placement minimizes such movement.

Research as a Growth for Validating Procedures: Student teachers typically are not aware of the research implications for teaching the English language arts. Nor should neophytes reasonably be expected to be acquainted with these implications prior to teaching, since the lone methods course in language teaching usually is offered concurrently with student teaching. That beginning teachers, and some established veterans, are ignorant generally of the research itself points toward one necessary course of action: teachers must examine published research, regularly check research summaries, and be alert to classroom applications of reported research. To do less is to admit to amateurism.

The *Encyclopaedia of Educational Research* is a monumental work and major source of information for teachers of all fields, including language. *The Review of Educational Research* summarizes language studies every three years. *The English Journal,* together with *College English* and *Elementary English,* should be read regularly. (These latter journals accompany membership in the National Council of Teachers of English). The *Journal of Educational Research,* another periodical to be found in all college and university libraries, often publishes studies in the language arts. M.A., theses and doctoral dissertations may be found also in college and university libraries, and usually are available nationally through inter-library loans. The *Education Index,* the friend of every student of education, lists research articles as well as other kinds of articles related to teaching. Nor should the teacher neglect the *Elementary English Review* or the *Yearbooks* of the National Society for the Study of Education. So valuable—and accessible to the future teacher—are these treasuries of knowledge that ignorance of their value is beyond excuse. Nevertheless, there are yet "teachers"

who, ignorant of research findings, continue to work inefficiently. These people waste their own energies, dissipate tax money, and inhibit the professional growth of new teachers.

Research findings clearly indicate more effective procedures in teaching. The methods prescribed in succeeding pages are research based; they have proved to be effective and only minor adaptations to local conditions should be necessary. Moreover, in his own work, the teacher always should be experimenting with variations in procedure to determine how to produce more learning, achieve better results, and thus relentlessly pursue excellence.

METHODS IN THE SUB-AREAS

Thinking and Writing: Three central precepts govern the teaching of good writing in the secondary school. First, patterns and habits of thinking determine effectiveness in writing. Second, to learn how to write one must write. Third, precision and habitual attention to the details of expression must be developed through extended practice. Teachers have known for a long time that one cannot write clearly unless he can think straight. Since adolescent thinking on occasion is about as organized as a pail of worms, language teachers must demonstrate the importance of logic, clear references, coherence, and unity in writing. Teachers today also are emphasizing the importance of ideas *per se* over against the dull recital of platitudes in grammatically correct sentences.

Guyer and Bird's excellent text treats of "shifting the issue, equivocation, begging the question, illicit appeals to feeling, oversimplification, and stereotyping" as common problems of straight thinking. The least sophisticated teenager, in his writing, may indulge in these sins, not through deception, but through innocence. For only as he learns that communication involves both writer and reader does he begin to trace the sequence of thought, analyse connotations, and check antecedents and transitions. The eighth and ninth grades are not too early to expect the youngster to supply evidence to support his contentions, however superficial, dog-eared, or transparent this evidence might be. Constant appeal to evidence to support argument becomes a habit. "What is your evidence?" might well be the cry of the teacher of writing, whether his students be in their seventh or thirteenth years of school.

If the teacher will focus his efforts and those of his students upon ideas and their clear expression, lesser considerations of form and detail can be learned more easily. The beginning teacher will find that most of the newer textbook series in English provide exercises designed to reinforce learning in straight thinking. If these exercises are taken seriously, one day the teacher will find his students catching him in violation of his own precepts. That will be the day of success, for, once alert to fuzzy thinking in the speech and writing of others, most students tend to grope more willingly toward improving their own expression.

To be Able to Write one must Write: There is no short cut, no easy way, no oblique approach to the hardwork of writing. One writes and rewrites if he is to

produce sentences that communicate what they are intended to communicate. Accordingly, the teacher must require that his students write, and write frequently, if they are to acquire proficiency.

Selection of topics appropriate to the maturity of students is not an easy matter. Differences in experience, ability, and motivation demand accommodation. Generally, personal-experience topics and topics derived from units under discussion kindle more and better self-expression than do contrived topics foreign to the student's experience. Thus anlgess or descriptions or conjectures about the literature being studied are more fruitful than coldly initiated assignments on abstractions. (And if books must be reported on, it is better to have the student explain why the hero was a hero rather than ask him to provide a dull page giving (a) list of characters, (b) setting, (c) time (d) plot, (e) publisher, and (f) degree of entertainment).

There must be a point to the writing, if it is not to be artificial and despised; students must expect that the writing will be read by the teacher and by others. An audience is important. Sharing of writing among members of the class tends to promote effort and encourage better work. Opportunities to see his writing printed in the school newspaper or magazine, duplicated for class use or display, or even mirrored and examined on a screen by means of an overhead projector will help to assure ego-involvement, gratifications, and consequent improvement in care and effort.

Ability to write well in English depends to a considerably higher degree upon general mental ability than upon knowledge of formal grammar. Numerous research studies indicate that a direct attack, concentrating upon meaning, is superior to a grammatical attack in problems of sentence structure. Again, the meaning of the matter to be communicated—and its importance to the student—comes into focus and warrants attention. Moreover, the brighter the learner the more he needs to write complex sentences and, usually, the more apt he is to write them easily. Sentence structure is one of the most significant signs of the general quality of writing; secondary school students appear to have more real difficulty with sentence structure than with any other single phase of written communication.

The guidelines which cut through confusion remain constant: establish the thought, write it out plainly, and only then sharpen or embellish it with the appropriate range of vocabulary, the nice turn of phrase, and the qualifying modifiers. How much should students write? Ideally, college-bound seniors in high school English classes should write a three or four-hundred-word paper a week or do other writing of equivalent concentration students may write less, but all should work at sentences and paragraphs until the thought, however simple, burns through. Letters, creative writing, formal reports, summaries, and informal essays all lend themselves to improvement in writing. But always the student should be encouraged to write when he believes that he has something to say. The variety of writing experience possible in the school is limited only by the imagination of the teacher.

As is true in other aspects of language teaching, school policy rightfully should make it obvious that good writing is not something to be practised and rewarded only in the English class. Vagueness and superficiality in writing in the science, social studies, and fine arts classes should not be countenanced lest the objectives of the school—and of the English faculty—be sabotaged. The following policy statement merits citation as a model:

English teachers should correct students on historical, arithmetical, or scientific errors when such occur in student speech or in written composition. Moreover, these teachers should be professional in emphasizing the importance of the ideas, knowledge, skills, and attitudes taught in the several subject fields offered throughout the school. Similarly, teachers in all fields should require legible handwriting, correct spelling, complete sentences, reasonable punctuation, proper capitalization, and grammatical correctness in all student work.

Recitations should be conducted carefully, with insistence upon good enunciation, suitable vocabulary, and clear sentences. Student use of *he don't, between you and I, this here guy, uh-huh,* and similar barbarisms reflects unfavourably upon the entire school and its faculty. Teachers of subjects involving technical vocabularies should introduce new words carefully and expect correct spelling; English teachers, for their part, are expected to teach basic lists of words and show students how to attack new words efficiently so as to assure spelling proficiency.

Precision must be Maintained through Long Practice: Practice makes perfect, but the lesson is hard to learn. One effective method of helping youngsters learn that sudden blinding inspiration is not the answer to good writing involves demonstration of typical revisions by working and established authors. If the students can see the original rough draft, two or three painstaking revisions, and then the final draft they usually are impressed with the care required to produce good writing.

Visits to university libraries and to the birthplaces of famous authors, when feasible, provide further opportunities to see remaining original drafts and manuscripts of literary works inter-lineations insertions and crossed-out words when made by master writers, nearly always are eye-openers to the immature. Framing sentences and recasting them also help the novice to catch mechanical and spelling errors which often slip by superficial inspection.

Spelling and the Techniques of Expression: Correct spelling and appropriate punctuation help to facilitate written communication; they are not ends in themselves unless teachers make them so.

Much of the dislike which people have toward language study originates in the series of unhappy experiences undergone in learning to spell or to punctuate. Free spirits rebel against restriction and the taking of pains when the necessity for control is not made apparent. Yet taking time to be exact does have its rewards; perceiving the rewards tardily—in the secondary school-is much better than never at all.

There are a few maxims and practices stemming from research in the teaching of spelling which should prove helpful:

1. Spelling is largely a visual, perceptual learning. One sees the English word—and to a lesser extent hears the word—rather than analyses or feels or dissects the word. With their roots in several languages, English words are only somewhat phonetic and their strange forms and variations often are beyond immediate explanation.
2. Learning many spelling rules is wasteful of time and money. Some rules are valid: the letter *u* always follows the letter *q* and the old *"i* before *e* except after c and when sounded as a as in neighbour and weigh." Beyond these two rules, it usually is easier to learn words individually, seeking to gain a sight vocabulary of words. There are too many exceptions to most of the usual rules; if rules are used at all, they should be taught inductively.
3. Learning how to attack new words efficiently is essential. See the whole word, pronounce it, look for the familiar and the hard or unusual parts, fix the impression, then write the word. Repeat to the point of mastery.
4. While some incidental or transfer learning will come through read-aughting and the learning of similar words, spelling words must be given to directly if they are to be taught effectively. Pretests should be given to indicate the words that each student should attack. If a student knows all the words in a planned lesson, give him other language work to do, preferably elective reading or something else he enjoys.
5. Insofar as possible, put spelling on an individual basis. The class should be offered base words, but everyone should have his own list to include words misspelled on pretests or tests classes or words for English classes or words which prove difficult in other courses.
6. English teachers should teach base words and the skills of attacking new words. Subject field teachers should teach specialized vocabularies and their spellings: *osmosis, photosynthesis, rectangle, shellac, hydromatic, lacquer, leucoplast.*

But just as spelling is one of the bugaboos of the indifferent secondary school youth, so the mechanics of expression infuriate some people through frustration with the little things. Errors in punctuation comprise the most common type of mechanical error in writing simply because not everyone learns his lessons well and because there are so many opportunities to make errors in English. Sentence sense in English derives from word order, rather than inflectional endings, and punctuation gives clues to the reader so that he can find his way. The teacher can impress this fact by changing word order in sentences and asking how meanings are changed. For example, ask adolescents to insert the word "only" alternately before each word in the sentence, "She told me that she loved me."

Certain punctuation skills must be taught, for they are aids to effective written expression. Both teacher and learner run into difficulty, however, when they

appeal to authority as to correct forms. Newspaper and publishing house style manuals, dictionaries, academicians, textbooks, secretarial schools, and the man in the street all may recommend some variant forms. There is no universal agreement on all punctuation usage except perhaps on the use of capital letters and the period to start and end sentences respectively. What, then, is right or wrong? The beginning teacher may rely on any of the more recent standard English series so long as he knows (1) that internal consistency is important in written work and (2) that one commonly accepted form is as good as another so long as the punctuation standards markedly help rather than detract from the sense of the statement. It is a relatively easy assignment for the new teacher to discover what his students have had or should know, before they reach him. First, he should examine courses of study of earlier grades. Second, he should scan language books used by children in earlier grades. Third, he should read appropriate sections of comprehensive college textbooks for descriptions of research-supported grade placement of specific items. Fourth, he should study the achievement tests administered by the school and check on individual scores.

Literary Tastes of Elevating Nature: For most Americans the senior high school includes the last formal exposure to literary models and the last persistent incitement to better reading. Since little children have no pronounced literary tastes, the adolescent years are potentially fertile for the development and even fixing of adult reading habits. Fortunately or not, the home environment strongly controls reading habits and choices. If the toddler is read to, and as a child is surrounded by attractive books and the sight of people reading, he also is likely to get the habit. Under different circumstances, another child may turn into a bowler, water skier, or television viewer. But while home cultural origins are important, the school has its role as well. Indeed, most adults first learned the names of notable literary works in the secondary school.

Only when the school assesses reading choices, knows its learners well, and matches maturity levels with required and elective reading will students choose reading over other activities. To gain converts to his cause, the good teacher will present reading as a quick and efficient way to learn and an exciting means to soar beyond dull care and personal limitations. The school library, moreover, must be tastefully furnished, plentifully stocked with attractively displayed titles, and made readily accessible for browsing. (Some amateur librarians think it their function to keep books secure and clean rather than to encourage their being read).

Beset at every side by printed trash, teenagers may find it hard to read books of proved merit. Friends and family, whose opinions they possibly respect more than those of teachers, may jeer at the reading of poetry, essays, or plays. At the drugstore, beauty saloon, supermarket, and barbershop, youth are diverted again from quality reading by arrays of lurid covers, pseudo-sophistication, and the comic book's pallid pabulum. Giving the customer what he seems to want, that is, effortless satisfaction of simple wants, makes profit for the publisher but does not open the eyes of the young to the vistas that lie beyond the back fence.

The hope of stretching minds spurs teachers to introduce students to the varied types of literature, the deathless characters, the plots, the very "emotion recollected in tranquillity" that await the discriminating reader.

There are various ways of effecting this introduction. One time worn procedure has been to survey English and American literature chronologically. By being sufficiently superficial, through this method one usually can arrive at the year 1900 in two semesters. Types of literature may be traced through their development, and units of study be given over to the short story, the novel, humorous prose and verse, the play, the narrative poem. Units may be built around the presumed interests of youth; several textbook series currently available are based upon such themes as adventure, exploration, achievement, love of country, famous men, and people of other lands.

From the seventh to the twelfth grades it is customary to proceed from the light and personal to serious and analytical reading materials. Freshmen and sophomores are still interested in light verse, sports stories, adventure, mystery yarns, and historical romance. Thus *Johnny Tremain, Les Miserables, Julius Caesar,* and collections of wholesome but exciting short stories may be offered. Mythology is staging its periodic revival and more attention is being paid the humanizing forces potential within literature study. Juniors can handle survey courses, and typically elect American literature; seniors may study *Hamlet, Macbeth,* or modern novels, or they may survey English literature.

As a rewarding preparation for his teaching, the English major might organize literary works with which he is acquainted under such categories as these:

Ninth year: Man's Relation to the Physical World.

Tenth year: Man's Relationship to Other Men.

Eleventh year: Man's Relationship to Organized Society.

Twelfth Year: Man's Relationship to Himself.

Under such an arrangement, there can be repetition in the presentation of major literary types and in the offering of several works which get at the same truth in different ways. There might be repeated opportunities to read single authors, single concepts, and single themes. There should be repeated practice in projecting the literary work beyond itself and into the life of the pupil by means of writing, group discussion, and memorization of passages. The whole idea is brief: use books to inform "current" interests.

There was a time when teachers and parents pretty well assumed that all secondary school youth could read, having so learned in the elementary school. Elders assumed also that the steady acquisition of knowledge through reading was the next step for all adolescents. These assumptions have proved to be false. Very nearly all high school youth read to some extent, some read wonderfully well, but few read as well as they could or should. For that matter, most adults could improve their reading skills markedly if they really tried. Among youth, reading rates often are appallingly low, vocabularies are unnecessarily limited, word-attack skills are undeveloped, and comprehension is a sometime thing.

Many American secondary schools and colleges have found it necessary to teach the skills of reading. Since entire books are given over to the problems encountered in such reading courses, it is appropriate here only to provide some guidelines. This is done through conviction that all teachers must to some extent teach through printed materials. When reading or other language deficiencies appear, through observation or results of the school testing programme, the good teacher immediately (1) notes any history of physical, emotional, or mental disability in the individual, (2) determines the precise nature of the language deficiency, (3) checks the physical conditions of his own classroom to eliminate noise, glare, and other distractions, and (4) attempts to establish or further cordial relations with his students.

Severe reading retardation may have many causes. Even with double-session elementary school classes, substandard teachers, television, careless parents, and over-crowded rooms, most youngsters learn to read well enough to escape the "severely retarded" category. Since treatment of severe cases is beyond the province of this book, college courses devoted to study of reading remediation are necessary and are strongly recommended.

The English teacher, with special responsibility for raising literacy levels, may become expert in working with severe cases of reading retardation. But always he can help other teachers see ways to improve the reading of those whose proficiency is not what it should be.

Here are some guidelines:

1. Reading must be made to seem important to the student. Hostility to reading may be aggressive behaviour concealing recognition of previous failure. The learner needs to want to read so that he can get information otherwise unavailable. Probing the real interests of the youngster may reveal that he wants to know how to skin-dive, repair an automobile, play a game, design clothing, correct skin troubles, travel, or build a boat. Motivation to read better is crucial.
2. Materials appropriate to the student's maturity and reading skills must be made available. In the last ten years, great progress has been made in preparing simple readings with topics appropriate to teenage interests. Lists and descriptions of these materials are sent to English teachers with and without the asking. Where ability grouping is not practicable, teachers must adapt instruction and reading materials to accommodate individual abilities. Continued failure to handle the reading given him only reinforces hostility and defeatism in the student.
3. Reading accelerators may be used carefully as extrinsic motivators and as temporary evaluative devices. Ordinarily, machines are used under the direct supervision of the English teacher. Machines which present printed lines of reading matter at prescribed rates have high attention value and can apprise the student of his relative proficiency. They do not, however, completely teach one how to read, build vocabulary, or assure comprehension. Gradually increasing the rate of presentation

usually pushes the student and encourages him to move along without making the visual regressions or pausing for the numerous eye fixations which slow the reading rate. Comprehension at different rates always must be checked. Very poor readers may be frustrated by reading machines.

4. Continuous personal encouragement and tangible rewards must be offered. This principle will appear difficult to heed with large classes; it is vital, however, if the reluctant, slow, or handicapped student is to improve his reading. Unless the poor reader can see that his efforts are worthwhile in some way, certainly the "impact of reading" will be minimized.

Listening and Speaking: During his student teaching experience, the neophyte learns that adolescents do not listen as they should. On occasion, carefully stated assignments apparently are not heard at all.

Day-dreaming and distraction largely account for this calamity more than actual hearing loss, and yet skills in listening have been neglected until relatively recently. Brown's inquiries into "auding" have encouraged others to pursue the study of listening for understanding. Listening certainly is more than hearing. The Commission on the English Curriculum of the N.C.T.E. describes four kinds of listening: passive or marginal listening, appreciative, attentive, and analytical listening. Teaching reading and listening involves similar tasks.

It is a curious phenomenon in America that so many secondary school students must snap on music or create some sort of continuous noise before they can settle down to read or work problems. It would seem that one must never enjoy quiet in the home, the car, or the supermarket. Enough of this and the earnest rhetoric of the teacher becomes mere background music for the secret thoughts and images of the learner. He simply tunes out the teacher. Analytical listening, the most difficult of all, requires that the listener weigh arguments against known truth, search for error in propaganda, and probe the speaker's intent. Practice in listening and regular tests over what was learned through listening can constitute important instruction. College-bound students especially need to learn to listen for key words and phrases, transition words, and the topic sentence. One cannot ask to have parts of the lecture repeated.

People talk more than they write; some even talk more than they think. Speech habits and skills are learned first in the home and the neighbourhood and later they may be modified in the school courses in public speaking are commonly offered, and usually built around the offering of humorous, descriptive, and exhortative talks by students, preceded by preparation of written outlines, speech as also is taught in all language classes. Attention to articulation and enunciation, polite but firm rejection of crudities, and the steady encouragement of improvement demand excellence on the part of the teacher. The weak-voiced should be asked to project and the loud be cautioned—by word and wince-to hush their braying. Mumbling and sloppy speech is widespread: the best way to overcome such habits is to tape-record the offenders and let public opinion

exert its influence. Acceptance of instruction comes easier once the tape is heard. The new teacher might practise his own speech in the same way. If the consonants are sounded with teeth and tongue, trippingly, the words will come through. Unfortunately, some people listen only to words, and meaning is trampled. Flow charts have proved helpful in evaluating oral communication.

Grammar and usage in English Language: One of the most difficult phases of teaching communicative skills in English is the teaching of grammar. It is controversial because the point of practical application varies with each student and because not all teachers define grammar similarly. Grammar really is a codification of usage, not something Olympian divined, and should be understood rather than learned by rote. Ordinarily, grammar should be taught inductively so that students can see the need for a rule governing the form or tense to be used. When they see the need, students can, through the study of grammar, become more articulate and more literate in speech and writing. Learning grammar through the sentence-building process, for instance, helps students become aware of the grammatical identity of their materials.

Many language skills, unfortunately, are lumped by laymen under the name of "grammar." Spelling, speaking, writing, penmanship, and vocabulary are not "grammar." The skilful and telling arrangement of words and sentences is rhetoric, not grammar. Rather grammar, as the science of language, is concerned with inflection, syntax, and the parts of speech.

Grammar as an isolated study is meaningless to many secondary school youth. Sentence diagramming, often included in grammar study, serves as a good visual aid to show the component parts of a sentence but hardly is a valuable skill of permanent value in itself. What is "grammatically correct," moreover, is subject to change. Thus Sapir, years ago, showed how drift in language cannot be ignored.

Pooley has demonstrated that "a great number of elementary school children are taught a large number of formal grammatical concepts, that these same materials are begun again in the junior high school and are carried a little further, and that still the same materials are begun again in the ninth grade of senior high school, and are repeated year after year through the twelfth grade. The results do not in any way justify the time and effort apparently put forth in this endless repetition." It would appear that only the earnest but ignorant can demand reductions in taxes, increased expressional skills, and "more grammar."

Good English is that form of speech which is appropriate to the purpose of the speaker and comfortable to the listener. Good English usage is the product of custom and is neither cramped by rule nor freed from all restraint. Scholars usually divide English usage into four levels: (1) the illiterate level, beneath acceptance by the educated; (2) the colloquial-homely level, substandard, yet not completely illiterate; (3) the standard level, formal and informal; and (4) the literary level, that form which goes beyond utility to achieve beauty or unusual cogency. American English affords additional avenues of study of profit to any teacher.

A provocative class exercise at this point is to discuss in groups the question, "To what extent, and by what authority, should the teacher impose his own

usage level upon his students?" (In an era of extreme population mobility, usage differences give rise to conflict. To scorn student-use of the first two usage levels, cited above, may be construed as scorn of the child's parents and relatives. Quaint though the question may be to some, it is pertinent in several parts of America.)

Teaching of Foreign Language: Remarkable forward strides have been made in the last decade in improving the quality of instruction in the foreign languages. First under the impetus of foreign language needs by Americans during World War II and then with the varied cultural impacts of space satellites and missiles, the Conant Report, publication of the popularly read *The Ugly American,* and increased foreign travel and international student exchanges, foreign language study has burgeoned in scope and status. Creation of the Peace Corps in 1961 by President John F. Kennedy served to accentuate the need for Americans to master at least one language in addition to their own. Elementary schools have introduced foreign language teaching in many communities, and a growing shortage of secondary school foreign language teachers has developed. Moreover, study of the Russian language finally has burst through the barriers of indifference and temerity, although in several instances initial enthusiasms have withered as the difficulties of learning the language have become apparent. Benjamin Franklin would have been delighted at the attention given today to the teaching of modern foreign languages; he might have been dismayed, however, to learn that the median age of Latin teachers rises annually. While Latin continues to be taught, colleges and universities plainly are not producing Latin "majors" as once they did.

As foreign language instruction has vitalized its method and demonstrated that steady progress is possible even for average-ability students, there has been correspondingly less concern with what the English teachers in the secondary schools do not teach. For many years, foreign language teachers, both in classical and modern fields, complained that English teachers were not teaching enough structural grammar. Allegedly, insufficient attention was paid to the nomenclature. Of course, English sentences derive meaning from word order rather than from declensions or inflectional endings. But the complaint persevered largely because the foreign language methodology emphasized the grammatical approach.

Research has pointed out the fallacies of the straight grammatical approach to language teaching. Today students do not start to conjugate verbs in the first week but rather are introduced to the sound and sight of the language. Tape-recordings are used extensively. Students begin to read and translate easy materials and then, as acquaintance is established, they begin to learn the grammatical structure of the language. If this comprises a more attractive way to learn, it also is a more efficient procedure. When attention is placed upon reading and speaking the foreign language, one learns to read and to speak, and this, it is assumed, is the main objective.

Experiments comparing the direct-oral and the grammar translation methods are continuing, as are those stemming from the direct reading techniques. Audio-

lingual methods are gaining increased attention. To keep current with changing procedure, foreign language teachers should study the *Modern Language Journal, Hispania,* and the *French Review.* Nor should the *Education Index,* the *Encyclopaedia of Educational Research,* and the *Review of Educational Research* be overlooked for their succinct summaries.

Teachers of foreign languages must establish and work constantly to further control over their subject matter. They cannot pretend to knowledge. It has been the pattern for secondary school youth to study a foreign language for only two years, although there has been a discrepancy between the values generally assumed for foreign language study and the actual proficiency achieved. More intensive practice, involving use of both recording discs and tapes, appears to hold great promise toward reducing the discrepancy; certainly the extended practice possible through electronic devices speeds learning, fixes patterns, and provides individual incentive toward achievement. Programming teaching machines and playing tapes may seem to be a far cry from the methods employed by instructors of another generation. And yet more rapid and thorough mastery of language skills may indeed accelerate the ancillary benefits wishfully presumed to accrue from the study of another tongue.

Setting the Schedule: There is no universal agreement as to the best weekly schedule m teaching language skills, native or foreign. While the foreign language teacher may confine his charges to translation for several day, Ings row, the English teacher more often is obliged to try to do many in a week's time. Flexible teaching schedules further confound the dilemma despite their obvious advantages.

A common but insensible practice for English teachers is in designate each day of the week for one set topic: Monday for literature, Tuesday for spelling and punctuation, Wednesday for oral expression, and so on. The opposite and rarer practice is to study literature steadily for a few weeks, then concentrate entirely upon spelling, turn to structural grammar for a stretch, then drill on usage.

The consensus is that the teacher should establish a schedule built around some meaningful unit so that sequence is not destroyed simply because today is Thursday. In keeping with precepts laid down in earlier chapters of this text, it follows that one should keep at a topic until it is finished or until an element of the topic can be mastered.

Thus a literary work should be pursued until it is completed, if at all possible, and a writing assignment followed for several hours rather than be ruptured by another activity alien to the central purpose. Making the daily transitions *is* the teacher's task; beginnings and endings should be laced together *so* that learning continues regularly.

Some larger schools set aside specific examination days for departments in order to avoid having major examinations in English, algebra, science, social studies, and French on the same day. If Monday is the English department's test day, the schedule can provide that reports, spelling, speeches, drills, or individual

study supplement or alternate with formal examinations while the other four days be devoted to a carefully planned sequence. Deriving written exercises, vocabulary enrichment, and speech material from literary works varies the activity but maintains continuity. A rigid schedule kills creativity; when learning joyously occurs, feed it, foster it, further it. Never let a schedule stand in the way of learning. It is better to let the schedule go, and the lesson plan burn, than to inhibit learning once it starts.

5

Policy Perspectives of Teacher Education

Every country develops its system of education to express and promote its unique socio-cultural identity and also to meet the challenges of time". These words of the National Policy on Education (NPE) 1986 subsequently revised in 1992, give direction to Indian Education. The policy further emphasizes that "the Government of India will also review, every five years; the progress made and recommend guidelines for further development". In the light of the aforesaid statements, the National Council for Teacher Education (NCTE), came out with a Curriculum Framework for Quality Teacher Education.

ROLE OF TEACHERS

The changes that took place in schools have changed the roles of teachers, too. In the past teachers used to be the major source of knowledge, the leader and educator of their students' school life. Nowadays, teachers provide information and show their students how to tackle them. Although they are still considered to be a kind of leader in the class, they can be thought of as facilitators in the learning process.

If we focus on the teaching process, we still realize that there are a great number of changes in this field as well, and all of them have an influence on the role of teachers. Curriculum design is a task teachers have to be prepared for, although the present generation of teachers has been growing into making up syllabi for years.

Another difference between the past and present tasks of teachers is represented by the technical background they need to be able to use and handle

effectively (computer, photocopier, power point, projectors, etc.) Instead of teaching chalk face, they need to be an information technology expert, a technician or/and a photocopy master. One of the biggest challenges for teachers is that their role in the school management has also changed. The school needs them as individuals, who can make decisions and cope with the stress of the changing world of schools. At the same time teachers need to be able to work in teams, co-operate with colleagues and parents. A teacher has to generate that energy in oneself and handle it in one's work of educating children. A teacher has not only to instruct but also to inspire the students.

ISSUES

While the process of learning is expected to evolve with the changing times, teachers in the government schools of India are stuck with the archaic methods. It is sad that many teachers still do not know how to use the teaching-learning materials. Interestingly, most of the students in these schools are asked to "read loudly" the chapters discussed on the previous day. Teachers reportedly ask students to mark the answers to the questions of back exercises in the book itself.

Many dedicated and brilliant school teachers are serving in various schools of the state. They limit their lives in the remote isolated village having no road connectivity and short of all modern amenities. Because of these teachers, our society survives and is progressing.

However, we can't deny the fact that with passing of time such dedicated, determined and sincere teachers are diminishing. Worst features of dilution of quality teachers are that many of school teachers in our country are unable to speak and write single correct English sentences.

SOLUTIONS

It would be worth experimenting with modular approach of teaching combined with interventions of realistic nature by way of field trips, visit to museums, zoo, educational excursions, visit to mountains, forests, intermediary interventions with real life situations and through audio-video devices, wherever possible.

Teaching in teacher training institutions be directed towards empowering prospective teachers to enable to use their experiences in actual work places for enhancing growth and development of young children. There is to be a planned amalgam of theory and practice in a way that these two constitute a continuum of experiences.

The teaching of theoretical components, in addition to what has been elaborated above, will combine various methods and approaches like lecturing, tutorials, seminars, term-papers, discussion groups, gaming, role planning, etc. The practical work of the prospective teachers will centre around evolving and devising programmes and activities for physical, psychomotor, cognitive, emotional and other aspects of development.

THE EVOLUTION OF TEACHER EDUCATION

Teacher education, as it exists today, can be divided into two stages, preservice and in-service. Preservice education includes all the stages of education and training that precede the teacher's entry to paid employment in a school. In-service training is the education and training that the teacher receives after the beginning of his career.

EARLY DEVELOPMENT

The earliest formal arrangements for teacher preparation, introduced in some of the German states during the early part of the 18th century, included both preservice and in-service training. A seminary or normal school for "young men who had already passed through an elementary, or even a superior school, and who were preparing to be teachers, by making additional attainments, and acquiring a knowledge of the human mind, and the principles of education as a science, and of its methods as an art" was set up in Halle in 1706. By the end of the century there were 30 such institutions in operation in Germany.

Systematic training was linked to an equally systematic process of certification, control of teaching conditions, and in-service study. All public teachers were required to attend a series of meetings to extend their practical knowledge. Parochial conferences took place monthly in the winter, district conferences bimonthly in the summer, a circle conference twice a year, and a departmental conference annually. Each seminary was responsible for maintaining contact with all the teachers working within a six-mile radius, and some established "repetition courses" for experienced teachers who wanted to refresh and add to their knowledge.

Nineteenth-century developments in education in the United States, Britain, France, Belgium, and Japan owed much to the pattern that had been established in Germany. In France at the time of the French Revolution efforts were made to set up a system of normal schools. The École Normale (later the École Normale Supérieure), founded in 1794, closed after a few months; but it was reestablished by Napoleon in 1808 to train teachers for the *lycées*. After 1833 a uniform system of *écoles normales* (initially only for male students) was created, and the normal-school systems of several countries date from the third decade of the century.

During the first 30 years of the 19th century, teacher preparation in the United States, Britain, and elsewhere was dominated by the monitorial methods introduced by Andrew Bell and Joseph Lancaster. In the simplest terms, the method involved a master instructing a number of senior pupils or "monitors," who then passed on their newly acquired knowledge to a larger number of pupils. Such methods were cheap, simple, and, it was widely believed, effective.

They required a necessary emphasis upon facts, drill, repetition, mechanical learning, and ease of teaching. By 1820 there were 20 Lancastrian schools in the state of New York, where the system had official status until the middle of the century.

With hindsight one can easily condemn the monitorial system. At the time, however, the supply of educated persons available and willing to teach in the elementary schools was severely limited, and the public funds to employ them were in short supply. The monitorial system, although faulted, enabled a large number of children to achieve the minimum level of literacy on which future development could build. Just as the organization of knowledge that prevailed during medieval times implied its own pedagogical methodology, so the Lancastrian system embodied a distinctive approach to the process of teaching; one of the attractions of such systems is that they provide a built-in solution to the problem of reconciling what the teacher needs to know and the pedagogical methods he should learn.

Among those who were unimpressed by the claims of the Lancastrian system was David Stow, who in 1834 founded the Glasgow Normal Seminary from which "trainers," as his graduates came to be called, went to schools in Scotland and many of the British colonial territories. In the United States, after an uncertain start, the Massachusetts Normal Schools founded by Horace Mann in the 1830s became a model for similar developments in Connecticut, Michigan, Rhode Island, Iowa, New Jersey, and Illinois. In England, churches and voluntary foundations were in process of establishing the first of the teacher-training colleges. Australia began the organized preparation of teachers in the early 1850s. At this early stage certain issues were already emerging that were to remain alive for the next hundred years and that are to some extent still relevant today.

The needs of pupils and schools were beginning to advance beyond basic literacy. Human knowledge was becoming more diverse and scientific and was being organized into new disciplinary systems. Secondary education was expanding. The early inclusive pedagogic systems were falling into disfavour. The problem arose of reconciling the teacher's personal need for education with his professional need for classroom technique. There were other than purely pedagogic considerations involved; the inhibitions of class society in England, the demand for practicality in the United States, a fear of liberal agitation in France, the patriotic missionary role of the teacher in Japan—all tended to maintain an emphasis upon the practical techniques of school management and to limit the range and level of the elementary teacher's intellectual accomplishments to mastery of only such subject knowledge as was needed at the school level.

Some educators asserted that the curriculum of the normal school should be academic, on the ground that the future teacher needed nothing more than experience of conventional subjects soundly taught. Others argued that training should have a purely professional function, including only such subject knowledge as the teacher would need in his classroom work. Some advocates claimed that the liberal and professional elements could readily be harmonized or integrated. The work of Derwent Coleridge, principal of St. Mark's College, London, who admitted that he took his models not from the pedagogical seminaries of Germany but from the universities of Oxford and Cambridge,

exemplified the attempt to introduce a larger element of general education into teacher preparation. Sir James Kay-Shuttleworth, founder of another London college, emphasized basic subject matter; he held that not merely the subjects of instruction, but also the methods of teaching the candidates, should be so ordered as to be in itself a preparation for their future vocation as teachers. On this account the oral instruction of classes in a Normal school is greatly to be preferred to any other mode.

In the United States, Horace Mann supported the value of a training in the "common branches" of knowledge, as a means of mental discipline. But the views of Derwent Coleridge, Kay-Shuttleworth, and Horace Mann, in common with those of many other educators of the time, reflected social as well as pedagogical considerations. Mann, it has been suggested, failed to recognize that the Prussian system that so impressed him was one that took lower class pupils and trained them as teachers of the lower classes—a system already under fire from German educators at the time that it was being used as a model for developments abroad.

Between 1870 and 1890, legislation was enacted in a number of countries to systematize and broaden the work of the normal schools. In Japan an ordinance of 1886 established higher normal schools providing a four-year course for boys and girls who had completed eight years of elementary education. A French law of 1879 established a nationwide system of colleges for training women primary teachers (*écoles normales d'institutrices*). In Russia a statute on teachers' seminaries was promulgated in 1870; within five years there were 34 such institutions, with nearly 2,000 students. A further statute in 1872 provided for institutes to train teachers for the new higher grade schools that were beginning to appear in the larger towns. In Scotland, the universities of Edinburgh and St. Andrews established chairs in education in 1876. In the United States a large number of universities had by 1895 set up education departments, and in some of them the preparation of teachers for work in the schools was beginning to be combined with systematic study and research in education processes.

Developments in American universities owed a great deal to the efforts of men such as Henry Barnard, who, as schools commissioner in Rhode Island from 1845 to 1849, stimulated a local interest in education that led to the creation of a department of education at Brown University. Barnard wrote an influential series of books on pedagogy and teacher education and later, as president of Columbia University, inspired Nicholas Murray Butler and others to found Teachers College in 1888. This soon became the foremost university school of education in the United States. It incorporated two schools as teaching laboratories, enrolling children from kindergarten to college age. As its "Announcement" of 1901 made clear, it was not restricted to any one level of professional preparation:

The purpose of Teachers College is to afford opportunity, both theoretical and practical, for the training of teachers of both sexes for kindergartens and elementary and secondary schools, of principals, supervisors and superintendents of schools, and of specialists in various branches of school work, including normal schools and colleges.

LATE 19TH- AND EARLY 20TH-CENTURY DEVELOPMENTS

Until about 1890 the "theoretical" elements in teacher preparation were of two kinds: the study of certain principles of teaching and school management, exemplified in the textbooks written by experienced schoolmen that were published in many countries during the second half of the 19th century; and instruction in "mental and moral philosophy," history of education, psychology, and pedagogics. Some of the most popular and influential works, such as Rosencrantz' *Philosophy of Education*, which was translated into English in the 1870s, made little distinction between philosophical and psychological data. But after 1890 psychology and sociology began to crystallize as more or less distinctive areas of study; students of education had a wider and more clearly structured range of disciplines to draw upon for their data and perspectives and to provide a "scientific" basis for their pedagogic principles.

In the middle years of the 19th century the ideas of the Swiss educator J.H. Pestalozzi and of the German Friedrich Froebel inspired the use of object teaching, defined in 1878 by Alexander Bain in his widely studied *Education as a Science* as the attempt

to range over all the utilities of life, and all the processes of nature. It begins upon things familiar to the pupils, and enlarges the conceptions of these, by filling in unnoticed qualities. It proceeds to things that have to be learnt even in their primary aspect by description or diagram; and ends with the more abstruse operations of natural forces.

The work of these pioneers also led to a clearer recognition of the developmental needs and character of childhood. Later contributors to the corpus of ideas that underlie the processes of teacher education continued to provide philosophical, sociological, and psychological justification for particular views of the nature of education and of teaching, and also had a greater or lesser influence on the methods to be employed in classroom and school.

The work of the German philosopher Johann Friedrich Herbart (1776–1841) was of particular importance in this latter respect. Herbart wrote a number of pedagogical works during his teaching career at the universities of Göttingen and Königsberg. In the latter part of the 19th century, the study of education along Herbartian lines became established in every European country, in America, and in Japan. Herbartianism offered a complete system—a philosophical theory, a set of educational aims, a rational psychology, and a pedagogy. Teaching, it held, should build on what the child already knows and should seek to inculcate, by the choice of appropriate materials, the highest moral character. It should be organized in accordance with the "five formal steps" of preparation, presentation, comparison, generalization, and application. The Herbartian doctrine rested as much upon the interpretation of his followers as upon the master's own works, and its influence was of relatively limited duration. Other ideas were coming to the fore, less direct and comprehensive than Herbart's but having greater impact upon the educational consciousness of the next half-century.

The influence of Darwinian evolutionary ideas upon pedagogy was very marked. To the extent that the evolutionary viewpoint emphasized the processes by which individuals become adapted to their environment, as in the teachings of the English philosopher Herbert Spencer, their influence was profoundly conservative. But evolutionary ideas were also embodied within the child development theories of the American psychologist G. Stanley Hall, who argued that the stages of individual growth recapitulated those of social evolution and therefore that the distinctive character and status of childhood must be respected.

The American philosopher William James also included evolutionary notions in his psychology. James's emphasis, however, was not so much upon the processes by which individuals adapt as upon those through which they react creatively and positively with their circumstances, helping to shape and change these to meet their needs. James's formulation of associationism, the building up of useful habit systems, had implications for the study of learning that teacher educators were quick to recognize and that were made more significant by the later experiments of the American psychologist Edward L. Thorndike (1874–1949). Thorndike's work with animals stands at the beginning of a tradition that continues to the present day. The laws of learning that he formulated have for long been a staple of teacher-training courses in many countries. Thorndike saw psychology as the basis of a genuinely scientific pedagogy and claimed that "just as the science and art of agriculture depend upon chemistry and botany, so the art of education depends upon physiology and psychology." He went on to argue, with a degree of confidence that rings strangely today, that

A complete science of psychology would tell every fact about everyone's intellect and character and behavior, would tell the cause of every change in human nature, would tell the result which every educational force—every act of every person that changed any other or the agent himself—would have.

The greatest influence on teacher-training curricula in the United States and many other countries was exercised not by the experimental psychologists but by the pragmatist philosopher John Dewey.

Dewey began with a conception of the nature of scientific method that he generalized into a specific pedagogical approach (popularized by others as the "project" method and, more recently, as inquiry-based learning). This he combined with a consideration of the nature of the child's interests and capacities for learning and life experience, the nature and claims of different types of subject matter, and the importance of democratic values in the social context of the school.

Just as James's psychology gave back to the teacher and the school some of the influence on individual development that the interpreters of evolutionary adaptation had seemed to deny, so Dewey's notion of the school as the embodiment of community ideals and the spearhead of social reform lent a new importance to the processes of teacher education.

It is tempting to categorize these various perspectives as "conservative" or "progressive." The former stress the importance of subject matter and of standard

methods of effective instruction: the need for regularity and order in the classroom and for means that will encourage children to apply themselves diligently to learning, the importance of the teacher as a subject-matter expert and as an exemplar of accepted morality, and the existence of objective standards of scholarship and achievement to which teachers and students alike should aspire. The progressives, on the other hand, emphasize a more child-centred approach, designed to build upon the natural interests and curiosity of the child: a flexible pattern of teaching and classroom organization recognizing individual differences in motivation, capacity, and learning style; a conception of the teacher as an organizer of children's learning rather than as an instructor; and the need to integrate the subject matter of different disciplines into topics and projects that have meaning in terms of the pupil's own experience.

Such conservative and progressive ideas have their roots in differing conceptions of the nature of man and society, of knowledge, and of the learning process. The differences are not new. The fortunes of the two perspectives tend to wax and wane in accordance with the times.

Thus, in the United States, fears of a loss of technological supremacy in the late 1950s encouraged conservative critics to point to the weaknesses of "child-centred" education. In the same way, anxieties about the meaninglessness of the education experienced by the poor, coupled with evidences of widespread alienation among the young, encouraged a revival of interest in progressive ideas in the early 1970s. Many educators, of course, do not fall into either the conservative or the progressive category but draw their ideas from various sources. There has been a tendency in many countries, however, for the curricula of teacher-preparing institutions to be identified with progressive educational ideas.

Many other ideas also influenced the curriculum and organization of teacher preparation during the last decade of the 19th and the first half of the 20th centuries. The dynamic psychology of Sigmund Freud and his early associates, the work of the Gestalt psychologists, the methods of measuring human abilities that were being developed in France, Great Britain, and the United States, the development of religious ideas in the Roman Catholic countries, the imposition of Marxist and Leninist ideologies in the former Soviet Union—all of these affected the normal schools, teachers' colleges and seminaries, and university departments of education. Such new ideas and systems of thought had their impact at three main levels.

First, they influenced the nature of the social commitment that teacher-preparing institutions strove to instill in their students: commitment to the values of democracy and of opportunity in the United States, as exemplified in the writings of Dewey; to a sense of national purpose or patriotism, as in France, Germany, and Japan; to the pursuit of the socialist revolution, as in the post-tsarist Soviet Union; or to a religious outlook as manifested by Catholic doctrine in Italy, Spain, and Latin America. Second, the philosophers, psychologists, and sociologists helped to redefine the teacher-pupil relationship. Whatever

their differences of view, clear continuities are visible among them on such issues as the significance of the child's needs and interests, the weaknesses of the formal academic curriculum, and the nature of individual development.

Third, the new contributions affected the organization of learning through the measurement and assessment of abilities, the diagnosis of special learning problems, the placing of children in homogeneous age and ability groups by means of "tracking" and "streaming," the emphasis on problem solving, and the project method.

These changes, reflected both in the way in which teachers were trained and in the architecture and equipment of schools, transformed education for younger children in many countries during the first half of the 20th century.

ORGANIZATION OF TEACHER EDUCATION IN THE 20TH CENTURY

The educational doctrines that inspired, conceptualized, and legitimated this transformation themselves reflected other social, political, economic, demographic, and technological changes. Urbanization, the reduction of infant mortality, improvements in child health, the fact that families, individuals, and whole societies could afford longer and better schooling, growth in the size of populations, greater capacity for control by central and local government, the availability of new kinds of educational apparatus and teaching aids—all these did much to shape the progress of teacher education during the decades after 1900.

Among the countries of the world the arrangements for the preparation of teachers vary widely. In some countries "monitors" still receive short courses of training as their preparation to teach large classes of young children. In North America, and to an increasing extent in other developed countries, most teachers are university graduates who begin their teacher preparation after completing four to six years of secondary education. Between these extremes many other arrangements exist. At one level, which for present purposes might be called Normal School A, entry is prior to the usual age of completion of secondary education. Training is limited to the achievement of competence in teaching a range of the subjects taught at the primary level and does not last more than five years.

The second level, which may be called Normal School B, also begins prior to the age of completing secondary education but usually after the "first certificate" at approximately age 16 or at the end of the period of compulsory schooling. This level provides combined courses of education and professional training, the former not necessarily limited to subjects taught at the primary level and extending beyond the usual age of completion of secondary education.

A third level, the college level, requires a full secondary education, usually ending at 18 but not necessarily with the same qualifications as are demanded of university entrants. Two- or three-year concurrent courses of general and professional education lead to the award of a teaching certificate, often valid for work in primary, intermediate, and lower secondary schools.

Finally, there is the university level, in which, after completing a full period of secondary education, the future teacher enters a multipurpose institution of higher education to follow three- to five-year courses of combined general education and professional training, the latter being either concurrent or consecutive, that lead to the award of a university degree and teaching qualification. Such qualification is considered valid for work at primary or secondary levels, or at both, according to the nature of the course followed.

Until the middle 1960s the normal-school pattern applied to students preparing for primary work in many European countries (Austria, Belgium, Spain, France, Italy, Iceland, the Netherlands, Switzerland, and Turkey), in Latin America, and in a number of Asian countries, although in many places there was more than one route to the attainment of qualified teacher status. The education and training of secondary school teachers was complicated by the general growth of secondary education for all. This encouraged the tendency to educate and train both primary and secondary teachers alongside one another in postsecondary colleges or in multipurpose universities.

More recently there has been a widespread movement away from the types of training described here as Normal School A and B to the college and university patterns. But the fact that a country has adopted what has been called here the university pattern of training should not be taken to mean that all the institutions in which teachers are prepared are comparable to the pre-existing universities; some are devoted mainly to teacher preparation.

6

Professional Learning and Development of Teacher

Finnish teachers possessing a master's degree have the right to participate in post-graduate studies to supplement their professional development. Many teachers take advantage of the opportunity to pursue doctoral studies in education, often while simultaneously teaching school. For doctoral studies in education, students must complete advanced studies in the educational sciences. This means that subject teachers much change their focus from their initial academic concentration, e.g., chemistry, to education, so that they not only understand their subject expertly, but also how the content can be better taught.

While Finnish teacher education has been praised for its systematic academic structure and high overall quality (Jussila & Saari, 2000), professional development and in-service programs for teachers are more variable. In Finland, induction of new teachers into their first teaching position is less uniform than initial preparation. It is up to each school and municipality to take care of new teachers' induction to their teaching assignments. Some schools, as part of their mission, have adopted advanced procedures and support systems for new staff, whereas other schools simply bid new teachers welcome and show them their classrooms. In some schools, induction is a specific responsibility of school principals or deputy principals, while in others, induction responsibilities may be assigned to experienced teachers. Teacher induction is an area that requires further development in Finland, as has been pointed out in a recent European Commission report (2004). Concerns have also been raised recently about the variability of in-service education. Municipalities, as the overseers of primary,

middle and high schools, are responsible for providing teachers learning opportunities, based on their needs. Whereas some Finnish municipalities organize in-service programs uniformly for all teachers, in others, it is up to individual teachers or school principals to decide how much and what type of professional development is needed and whether such interventions will be funded.

Although schools are equitably financed, the central government has only limited influence on the budget decisions made by municipalities or schools. Therefore, some schools receive greater allocations for professional development and school improvement than others, especially where, during times of economic downturn, professional development budgets are the first to vanish. Teachers' annual duties include three days devoted to planning and professional development. According to a Finnish national survey, teachers devoted about seven working days per year on average to professional development in 2007; approximately half was drawn from teachers' personal time. About two-thirds of primary and secondary school teachers participated in professional development that year.

In response to concerns that participation in professional development may be decreasing (Ministry of Education, 2009), the government is planning substantial increases in professional development budgets and considering ways to require that all teachers must have access to adequate professional training financed by municipalities. The state budget annually allocates some $30 million to professional development of teachers and school principals through various forms of pre-tertiary and continuing education. The government determines the focus of the training, based on current national educational development needs, and the training is contracted out to service providers on a competitive basis. The Finnish Ministry of Education (2009), in collaboration with municipalities, plans to double the public funding for teacher professional development by 2016.

THE TEACHER'S TOOLS: CURRICULUM AND ASSESSMENT

Since teacher education became part of academic university studies in the 1970s, Finnish teachers' professional identity and status have gradually increased. During the course of Finland's education reforms, teachers have demanded more autonomy and responsibility for curriculum and student assessment. The professional authority and autonomy that teachers have in Finland is an important factor in explaining why so many young Finns consider teaching as their most admired future job. While the National Curriculum Framework for Basic School and similar documents for upper secondary education provide guidance to teachers, curriculum planning is the responsibility of schools and municipalities. The school-level curriculum is approved by local education authorities and teachers and school principals play a key role in curriculum design. Teacher education provides them with well developed curriculum knowledge and planning skills. Moreover, the importance of curriculum design in teacher

practice has helped shift the focus of professional development from fragmented in-service training towards more systemic, theoretically grounded schoolwide improvement efforts.

Along with curriculum design, teachers play a key role in assessing students. Finnish schools do not use standardized testing to determine student success. There are three primary reasons for this. First, while assessment practice is well-grounded in the national curriculum, education policy in Finland gives a high priority to individualized education and creativity as an important part of how schools operate. Therefore the progress of each student in school is judged more against his or her individual progress and abilities rather than against statistical indicators. Second, education developers insist that curriculum, teaching, and learning should drive teachers' practice in schools, rather than testing. Student assessment in Finnish schools is embedded in the teaching and learning process and used to improve both teachers' and students' work throughout the academic year.

Third, determining students' academic performance in Finland is seen as a responsibility of the school, not the external assessors. Finnish schools accept that there may be some limitations on comparability when teachers do all the grading of students. At the same time, Finns believe that the problems often associated with external standardized testing—narrowing of the curriculum, teaching to the test, and unhealthy competition among schools—can be more problematic.

Since Finnish teachers must design and conduct appropriate curriculum-based assessments to document student progress, classroom assessment and school-based evaluation are important parts of teacher education and professional development. Although Finnish teachers' work consists primarily of classroom teaching, many of their duties lay outside of class. Formally, teacher's working time in Finland consists of classroom teaching, preparation for class, and two hours a week planning school work with colleagues. From an international perspective, Finnish teachers devote less time to teaching than do teachers in many other nations.

For example, a typical middle school teacher in Finland teaches just less than 600 hours annually, corresponding to about four 45-minute lessons a day. In the United States, by contrast, a teacher at the same level devotes 1,080 hours to teaching over 180 school days. This means that a middle school teacher in the United States, on average, devotes about twice as much time to classroom teaching compared with his or her counterpart in Finland. This, however, does not imply that teachers in Finland work less than they do elsewhere. An important—and still voluntary—part of Finnish teachers' work is devoted to the improvement of classroom practice, the school as a whole, and work with the community. Because Finnish teachers take on significant responsibility for curriculum and assessment, as well as experimentation with and improvement of teaching methods, some of the most important aspects of their work are conducted outside of classrooms.

THE ROLE OF CO-OPERATING SCHOOLS AND TEACHER

Private schools in India are perceived as providing a better education and a higher caliber of teachers. More prestigious and catering mainly to a privileged section of society, they have a better profile than public schools, with higher results on examinations and high-quality teaching personnel (Kindgon and Dreze 1998; Surya 2000).

Private school facilities are better than those that can be expected in most public schools; thus, innovations in education, whether they are systemic, instructional, or curricular, are more likely to take place in private institutions than in public schools (Gautama 1997). They are also selective in hiring and demand a high level of efficiency.

As a result, teachers are better trained, more dedicated, and more focused on the academic achievement of their students. Public school teachers, on the other hand, are perceived as lax in performing their regular teaching activities. It may be unrealistic, therefore, to expect them to take on other responsibilities with enthusiasm, especially when their own teacher education experiences may not have been inspiring or useful to them (Department of Education 1986).

COEs would therefore like private schools in India to host and supervise preservice teachers, because they may afford preservice teachers a more positive experience. However, teacher education in India is isolated from schools; neither public nor private school systems are closely involved in training future teachers (Central Advisory Board of Education 1992; Committee for Review of National Policy on Education 1990; Ramanathan 1998). Furthermore, private schools are wary of the quality of preservice students and do not participate widely in field experiences (Ramanathan 1999b).

Because few preservice teachers are placed in private schools, teachers in these schools have very little experience and are not significantly involved in the supervision or evaluation of student teachers. Neither the limited length of field experiences nor their responsibilities require them to be in close enough contact with preservice teachers to influence them significantly. University supervisors help student teachers with planning, observe the implementation, and are solely responsible for grading. Cooperating teachers are therefore peripheral to the experience (Ramanathan 1999a).

On the rare occasions cooperating teachers are expected to supervise student teachers, they have no guidelines to follow. Their own student teaching experience of three weeks does not compare with the minimum of 10 weeks of student teaching generally required in the United States. Their own supervision as student teachers also provided an unsuitable example (National Policy on Education 1986). Thus, the clinical model of supervision with a cycle of pre-observation conferencing, observation, and post-observation conferencing is unfamiliar to them (Ramanathan 1999b).

University supervisors are not a rich resource for cooperating teachers. Relations between them are superficial and sporadic (Ramanathan 1999a).

Furthermore, higher education institutions in India are not research-oriented, being neither producers nor consumers of research (Raina 1997). It is difficult to change or modify the traditional supervisory practices of university supervisors to suit cooperating teachers.

Not surprisingly, COEs do not see it as incumbent on them to provide professional development for cooperating teachers in private schools. Sporadic attempts to do so have been unsuccessful for the same reasons as in the United States-lack of time or incentives for cooperating teachers. Efforts to make it a requirement at the district level have not met with success (Ramanathan 1998). Thus, cooperating teachers in India's private schools do not have a strong understanding of supervisory practices.

Therefore, if student teachers from the United States are to have the quality of mentoring in India they may expect from their cooperating teachers at home, mentors in India's private schools must have special training.

This professional development must encompass the supervision and mentoring skills of their U.S. counterparts. In addition, they must learn to create a realistic environment for students to learn about teaching in a new culture.

Finally, recognizing that this could be a learning opportunity for both mentor and mentee, cooperating teachers may question their own practices and beliefs in the light of student teachers' experiences. Apart from all the fresh teaching ideas student teachers will bring into the classroom, this unique situation provides cooperating teachers insights into their teaching context from a global perspective. Cooperating teachers must be alerted to this potential.

THE CHARACTERISTICS AND DEMANDS OF TEACHING PROFESSION

Paradoxically, following the 86th Amendment of the Constitution which makes it mandatory for the State (government) to provide free and compulsory education to all children in the six-14 age group, and national rollout of the Sarva Shiksha Abhiyaan (Education for All) programme, never before has teachers' morale been so critical to national development in this country blessed or cursed — informed opinion is divided — with the world's largest child population (415 million).

Unfortunately the rising tide of teacher discontent and disaffection is swelling at a time when an unprecedented shortage of teachers is manifesting across the country.

Suddenly as government and private schools, colleges and universities are confronted with an unprecedented teacher shortage, alarm bells are ringing in Indian academia, even if not in the sleepy warrens of the education ministries in New Delhi and the state capitals.

In Karnataka, 23,000 teaching posts in government primary and high schools are vacant; in benighted Bihar, teacher vacancies number 2.3 lakh. The Unesco Institute of Statistics in its report Teachers and Educational Quality: Monitoring Global Needs for 2015 released in June, says that to meet the Millennium

Development Goal of providing elementary education to all children by 2015, "India will need the greatest inflow of new teachers in the world — more than 2 million".

It's an indicator of the depth of the growing teacher shortage slowly overtaking India that the bourgeoning private schools sector, which hitherto attracted a perennial supply of best and brightest teachers, is also experiencing a faculty crunch. According to www.schooljobs.in, India's pioneer online teacher recruitment portal, 500 vacancies have been notified by private schools during the past three months.

Moreover the appointments pages of national newspapers are increasingly attracting teacher recruitment advertisements with one school sometimes advertising for 15-20 teachers.

Gone are the days of principals of top schools such as Bishop Cotton, Bangalore, Doon School and Delhi Public School boasting about piles of unsolicited job applications from highly experienced teachers on their desks. Today, for the first time ever, jobs are chasing teachers, rather than the other way round.

"Though government schools always had the problem of unfilled teacher vacancies because of budgetary problems, it's perhaps for the first time that private schools are confronted with an acute teacher shortage.

This is largely because post-liberalisation, with the huge demand for people in the IT and BPO (business process outsourcing) sector, the number of young people entering the teaching profession has decreased dramatically. Moreover post 1991, India has witnessed a sharp uptrend in the promotion of private schools. These institutions which specifically cater to the aspirations of the country's growing middle class are mushrooming at a fast rate and have created an unprecedented demand surge for well-qualified teachers. But while the demand for teachers has shot up, supply has declined. According to a research, India needs 800,000 new teachers every year for the next three years if it's to make up the shortfall and cater to new student enrollments.

Indeed mushrooming private schools across the price spectrum is arguably the single most important factor contributing to the national teacher shortage crisis. Academic estimates indicate that the number of private schools in India has leapt from 50,000 in 1996 to 77,140 in 2006.

In this meteoric growth trajectory, the rash of five-star 'international' schools springing up countrywide has attracted great public and media attention (India currently boasts over 100 international schools).

Though these highly capital-intensive schools — which offer sprawling playing fields and sports facilities, wired classrooms, five-star residential accommodation and cuisine, and affiliations with the best national and international examination boards at annual tuition fees ranging from Rs.1-6 lakh — offer much better pay packets and working conditions to teachers than traditionally top-ranked CBSE and CISCE affiliated private schools, they too are encountering considerable difficulty in recruiting and retaining qualified teachers.

The groves of academia are buzzing with stories of 'body snatching' of teachers by international schools — particularly principals' — emoluments beginning to match corporate salaries.

According to Anu Monga, principal of Bangalore International School (no. of teachers: 60; student enrolment: 250) and chairperson of the The Association of International Schools of India (TAISI). "International schools countrywide are experiencing a scarcity of competent teachers.

Since international curriculums demand highly qualified and well-trained faculty, it's becoming increasingly difficult for schools to deliver internationally acceptable education without talented and committed teachers. We are aware of the unethical ways in which some international school managements are luring teachers from competitor schools.

Therefore TAISI has decided to evolve a code of conduct for members with regard to recruiting teachers from member schools. But if international schools want to really reduce teacher attrition they must pay greater attention to continuous teacher training and development. Their focus has to be on motivating and retaining young professionals as teachers."

Although emerging teacher body snatching wars and unprecedented pay packages for the competent have prompted much head shaking and tuttutting among leftists and traditional academics, the entry of internationally benchmarked schools into the education sector has served the useful purpose of endowing the teaching profession with new social respectability.

By awarding teachers superior working conditions, opportunities to use creative teaching methodologies, uncrowded classrooms, continuous teacher development programmes and most important, pay packets ranging from Rs.20,000-50,000 per month, the country's 100-plus international schools have made teaching a more attractive and profitable profession. And encouragingly there's a distinct possibility that the most idealistic — even if not the best and brightest — graduates of the country's 344 universities and 17,700 colleges may re-evaluate teaching as a career.

Promoters of the rash of five-star international schools offering leisure-resort style, landscaped, fully-wired campuses bristling with hi-tech equipment and teaching aids, have been brought down to earth with the growing awareness that the unique selling proposition of high-end academic institutions is excellent faculty, rather than luxurious infrastructure.

Pressure from upmarket parents paying chastening fees of Rs.1-6 lakh per year upon managements to make good their promise of delivering a 21st century international education is beginning to tell. Consequently, faculty raids popularly known as body snatching have become de rigueur within the esoteric world of India's estimated 100 international and 9,500 upscale private schools.

The rapid turnover of teachers in international schools is particularly painful for their high networth promoters as teacher training for international school curriculums —IGCSE and/or the International Baccalaureate diploma — is very expensive. For instance the IB teacher-training programme averages

Rs.25,000 per teacher and IGCSE Rs.15,000. Therefore the flight of a trained teacher is an expensive loss. Yet better pay packets apart, a contributory cause of accelerated teacher migration from the new genre of capital-intensive five-star schools is the authoritarian command-control management style of first generation school promoters, usually businessmen-turned educationists. "This new generation of promoters not only lacks institutional management and teaching experience, they also tend to be too hands-on and interfere in everything from curriculum development, extra-curricular activities to classroom teaching styles. Experienced teachers and principals with numerous job options can't stomach this," says a Mumbai-based education consultant.

This newly emergent friction between promoters and high-profile headmasters is exemplified by the recent career graph of Dev Lahiri, former headmaster of Lawrence School, Lovedale. Following his exit from Lawrence Lovedale reportedly for refusing to toe the line of former Union HRD minister Dr. Murali Manohar Joshi, Lahiri was appointed the first principal of the upscale Selaqui School, Dehra Dun in 2003, which he quit, complaining about the ubiquitous presence of promoter Om Pathak on the school campus.

The same year he signed up as principal of Kolkata's The Heritage School, which he quit again pleading irreconcilable differences with the promoter. Currently Lahiri is headmaster of the tried and tested 69-year-old Welham Boys School, Dehra Dun.

Certainly within the hitherto socially under-rated teachers community there is rising enthusiasm about the new developments in school education. Bangalore-based Preeti Vincent, a maths teacher who resigned from the Indus International School in 2004 to sign up with Bangalore International School, confirms that the emergence of international schools has changed the popular perception that teaching is a low-skills profession.

Moreover it has given India's long-neglected teachers community a booster shot of new hope and excitement. "International schools value and recognise competent teachers, offer the best remuneration in the market and pay great attention to continuous teacher development and training with some of them even sending teachers abroad for training. However although the new international schools have redefined the role of teachers, very few involve them in curriculum development and decision making. Doing so is vital to motivating and retaining them.

Inevitably the prime target group of international schools and head hunting firms are under-paid teachers in the country's 8,097 CBSE and 1,502 CISCE affiliated schools. Given that even in the most highly-rated English medium schools, annual remuneration packages average a modest Rs.80,000-120,000, teachers from these schools are flocking to international schools where twice this pay is common.

This teacher exodus to five-star schools has forced CISCE and CBSE schools to raise pay and incentives to retain their most experienced faculty who are being targeted — often harassed— for recruitment.

But if despite substantially improved pay packages and service conditions, private schools in India are experiencing an accelerating teacher shortage, this is a global phenomenon. Most western countries, especially the US and UK, are also reporting rising teacher vacancies — particularly of maths, science and English teachers.

In the US there are an estimated 22,000 vacancies for school teachers. Therefore the emerging teacher crisis in private schools in India is also connected with intensifying recruitment of private school (government school teachers are an altogether different genre) teachers by school managements and local governments in these countries. Currently there are over 25,000 secondary school teachers from India abroad.

The emerging shortage of teachers is not peculiar to upmarket independent schools. Even schools at the bottom of the private education pyramid are complaining of teachers being lured away by the BPO industry and other sectors of the economy. These mostly English-medium unaided schools which comprise the largest group in the private school sector catering to children from lower middle class families, are affiliated with state examination boards and charge annual tuition fees ranging between Rs.5,000-10,000. Since they keep tuition fees low and affordable, teacher salaries are abysmal by 21st century standards — typically between Rs.3,000-5,000 per month. The BPO industry, which is growing at 56 percent every year and offers start-up monthly remuneration of Rs.10,000-15,000, has been quick to discern this unhappiness over pay and working

Yet if private schools are experiencing teacher shortages for the first time in post-independence India for demand-pull reasons, their problems — and ability to resolve them — pale into insignificance when compared with faculty shortages in the country's estimated 1,000,000 government-run primary and secondary schools.

By a curious and typically Indian anomaly, government school teachers enjoy 30-50 percent higher pay than private school teachers. But even with teachers' pay pegged at above market price, for years the country's Central and state governments which are running huge fiscal deficits have neglected to appoint additional teachers.

Consequently most of the 31 states of the Indian Union have thousands of teacher vacancies in government schools. In Uttar Pradesh 61,437 teachers' posts are vacant, in Karnataka 13,500 new teachers need to be appointed, while in Bihar there's a massive deficit of 2.3 lakh teachers.

Fortunately because of public pressure to meet the target of the Sarva Shiksha Abhiyaan (Education for All campaign) which was launched in 2001 and followed by the Right to Education Bill, 2006 that guarantees free education to every child between six and 14 years, state governments have been compelled to make provision for recruiting new.

Yet perhaps the most disturbing fallout of the creeping teacher shortage nationwide is crowded classrooms and single teacher schools. India already

boasts one of the highest teacher pupil ratios in the world: 1:60 (according to World Bank data) and over 200,000 government schools have only one teacher who conducts multigrade classes simultaneously. Consequently poor learning outcomes which is a defining characteristic of Indian education is certain to remain an unresolved problem.

"In some states like Bihar and Uttar Pradesh the teacher-pupil ratio is 1:62. To halve this ratio or at least reduce it to a more manageable 1:40, we need to aggressively recruit teachers. While para teachers are good as a stopgap arrangement, they should be replaced by regular well-trained teachers.

Against this backdrop of the bewildering mess which has been made of the chronically under-provided education system, it's hardly surprising that India's youth are reluctant to enter the teaching profession — synonymous with shabby, crowded classrooms; dilapidated infrastructure (toilets, water, libraries, laboratories), unsympathetic parents and lack of social respect.

"Regrettably teaching no longer attracts committed and talented young people. It's right at the bottom in the hierarchy of professions. If we want to attract talented youth into the profession, teaching needs a complete makeover. It has to be repackaged as a stimulating, interesting and well-paying profession. You can't pay a teacher as much as you pay your domestic help and hope to provide quality education.

Yet at bottom, India's pernicious teacher shortage crisis is a problem of quality, rather than quantity. The country's estimated 20,000 teacher training institutions (including government and private sector Montessori, D.Ed, B.Ed and M.Ed colleges) which churn out 300,000 teaching graduates every year, are lumbered with outdated curriculums delivered by de-motivated faculty.

"In terms of the number of B.Ed postgraduates, India has a sufficient annual output. But how many of them are sufficiently trained to be effective in their classrooms, is the moot point. Ninety percent of B.Ed postgrads are under-qualified and need further training before they can be allowed to handle classes independently.

The upshot of all this is that in the final analysis, with the 86th Amendment to the Constitution having endowed all of India's estimated 375 million children aged six to 14 years free and compulsory education, the Central and state governments have no option but to re-order their spending priorities and raise their combined annual education outlay from the current 3.5 percent of GDP to 6 percent as was presciently recommended by the Kothari Commission in 1966.

Even as post-independence India's establishment stands indecisive at a historic crossroads in the new millennium, the education system is in the throes of an unprecedented crisis characterised by enormous teacher shortages, crumbling institutional infrastructure and deplorable learning outcomes. If a radical re-ordering of national spending priorities is not undertaken expeditiously, India's much-trumpeted demographic dividend could soon morph into a demographic disaster.

7

New Trends in Teacher Preparation: Philosophy and Supervisory

Teachers need to know what instruction they want to improve before they can actually begin to improve instruction. The supervisor's role is to help the teacher the teacher devise instructional strategies that can be used to improve instruction.

BELIEFS ABOUT EDUCATION

Teacher and supervisor's beliefs about the purpose of education greatly influence the classroom and instructional improvement efforts.

SUPERVISION BELIEFS

Since most administrators are former teachers their background as a teacher influences their view of supervision.

SUPERVISORY PLATFORM AS RELATED TO EDUCATIONAL PHILOSOPHY

There are many different educational philosophies. Three major philosophies have a relationship with supervision.

ESSENTIALISM

This philosophy believes reality is absolute and unchanging. It dates back to the Greeks. This teaches the mind to think in a natural and logical way. There is

a body of timeless knowledge and the supervisor must be the most knowledgeable. The teacher teaches truth. The supervisor is the expert and transmits knowledge to the teacher.

EXPERIMENTALISM

This philosophy is based on pragmatism, progressivism and reconstructionism. They believe in the scientific method and in proving something as true. They also believe there is no absolute truth. Knowledge is always changing. Morality is seen as the behavior that promotes the group's great good. Teachers and students should not be content with knowledge they are constantly testing old hypotheses and trying new ones. The supervisor works democratically with teachers. They view schools as laboratories to test hypotheses.

EXISTENTIALISM

This is the rejection of other philosophies and is a combination of essentialism and experimentalism. They believe in rational, scientific thinking to explore and frame knowledge. The individual is the source of reality and reality only exists within one's own existence.

Human relations are very important and knowledge of one's self and allowing others the freedom to know themselves is very important. The supervisor allows the teacher to make their own choices. Teachers explore and learn on their own.

THE CHANGING ROLE OF THE TEACHER

The answer varies from culture to culture, millennium to millennium–from Socrates to Jamie Escalante, the vision changes. But looking back to the beginning of public education in the United States may offer a surprising perspective on the role of the teacher, and how it has changed since the early 1900s.

In the foundational book *Democracy and Education*, published in 1916, public education pioneer John Dewey ironically warns us that getting (the conditions for self-directed learning) just right as a teacher-designer requires a deep understanding of how people learn to think and solve *real* problems – a design that makes the learner have to truly think their way through things, and thereby believe that they are creators and discoverers (even if by design we have made the re-discovery possible):

What a Teacher was Supposed to do in 1916 (According to John Dewey)

"The educational conclusion which follows is that all thinking is original in a projection of considerations which have not been previously apprehended. The child of three who discovers what can be done with blocks, or of six who finds out what he can make by putting five cents and five cents together, is really a discoverer, even though everybody else in the world knows it. There is a genuine increment of experience; not another item mechanically added on, but enrichment

by a new quality. The charm which the spontaneity of little children has for sympathetic observers is due to perception of this intellectual originality. The joy which children themselves experience is the joy of intellectual constructiveness—of creativeness, if the word may be used without misunderstanding.

The educational moral I am chiefly concerned to draw is not, however, that teachers would find their own work less of a grind and strain if school conditions favoured learning in the sense of discovery and not in that of storing away what others pour into them…. It is that no thought, no idea, can possibly be conveyed as an idea from one person to another. When it is told, it is, to the one to whom it is told, another given fact, not an idea…. Only by wrestling with the conditions of the problem at first hand, seeking and finding his own way out, does he think…. We can and do supply ready-made "ideas" by the thousand; we do not usually take much pains to see that the one learning engages in significant situations where his own activities generate, support, and clinch ideas—that is, perceived meanings or connections.

This does not mean that the teacher is to stand off and look on; the alternative to furnishing ready-made subject matter and listening to the accuracy with which it is reproduced is not quiescence, but participation, sharing, in an activity. In such shared activity, the teacher is a learner, and the learner is, without knowing it, a teacher—and upon the whole, the less consciousness there is, on either side, of either giving or receiving instruction, the better.

All educational reformers, as we have had occasion to remark, are given to attacking the passivity of traditional education. They have opposed pouring in from without, and absorbing like a sponge; they have attacked drilling in material as into hard and resisting rock.

But it is not easy to secure conditions which will make the getting of an idea identical with having an experience which widens and makes more precise our contact with the environment. Activity, even self-activity, is too easily thought of as something merely mental, cooped up within the head, or finding expression only through the vocal organs."

CHALLENGES IN TEACHER EDUCATION

Unprecedented expansion of teacher education institutions and programmes during the past few years characterizes the teacher education scenario of today. With increasing school enrolments and the launch of pan-Indian primary education development programmes like Operation Blackboard, District Primary Education Programme, Sarva Shiksha Abhiyan and Universalization of Elementary Education, there was a natural increase in the demand for teachers.

Added to this, the backlog of untrained teachers in the system and the essential requirement of pre-service teacher certification for appointment as a teacher led to mounting pressure on existing institutional capacity. The demand far exceeding supply, market forces have taken over unprecedented rise in the number of teacher education institutions in most parts of the country. From 3489 courses in 3199 institutions and an intake of 2,74,072 in 2004, the numbers

in December, 2008 swelled to 14,523 courses in 12,200 institutions with an intake of 10,73,661 at different levels. This expansion has taken a heavy toll on quality parameters like infrastructure, faculty learning resources and student profile. Teacher education as a whole needs urgent and comprehensive reform. There is a need to bring greater convergence between professional preparation and continuing professional development of teachers at all stages of schooling in terms of level, duration and structure. Considering the complexity and significance of teaching as a professional practice, it is imperative that the entire enterprise of teacher education should be raised to a university level and that the duration and rigour of programmes should be appropriately enhanced.

RESEARCH AND INNOVATION

There is a need to increase research that documents practices reflectively and analytically- whether it is of programmes or of individual classrooms – so that it can be included in the body of knowledge available for study to student teachers. University departments and research institutions need to undertake such research. In addition there is a need to innovate with different models of teacher education. Institutional capacity and capability to innovate and create are a pre-requisite for the pursuit of excellence. Hence in the present scenario a lot of impetus has been given to research. Many teacher educators are encouraged to take up either major or minor research projects.

Inclusive Education

There are two kinds of exclusion prevalent in schools; one is the exclusion of the child with disabilities and the second is the social exclusion of children who come from socially and economically deprived backgrounds. There is a dire need to equip teachers to overcome their biases in these regards and positively handle these challenges.

The Persons with Disabilities (PWD) Act of 2005 provides for free and compulsory education up to the age of 18 years for all children with disabilities. The education of socially and economically disadvantaged groups, especially the SCs, STs and minorities has remained a primary national concern of education for several years. The enrolment and retention of girls and therefore their participation has also remained behind those of boys. Teachers will have to be specially equipped if the social deprivation has to be overcome through education.

Perspectives for Equitable and Sustainable Development

In order to develop future citizens who promote equitable and sustainable development for all sections of society and respect for all, it is necessary that they be educated through perspectives of gender equity, perspectives that develop values for peace, respect the rights of all, and that respect and value work. In the present ecological crisis promoted by extremely commercialized and competitive lifestyles, children need to be educated to change their consumption patterns and the way they look at natural resources.

There is also a increasing violence and polarization both within children and between them, that is being caused by increasing stress in society. Education has a crucial role to play in promoting values of peace based on equal respect of self and others. The NCF 2005 and subsequent development of syllabi and materials is attempting to do this as well.

NEED, SCOPE AND OBJECTIVES OF TEACHER EDUCATION

NEED OF TEACHER EDUCATION

The American Commission on Teacher Education rightly observes:

- "The quality of a nation depends upon the quality of its citizens. The quality of its citizens depends not exclusively, but in critical measure upon the quality of their education, the quality of their education depends more than upon any single factor, upon the quality of their teacher."

In his Call for Action for American Education in the 21st Century in 1996, Clinton indicated that:

- Every community should have a talented and dedicated teacher in every classroom. We have enormous opportunity for ensuring teacher quality well into the 21st century if we recruit promising people into teaching and give them the highest quality preparation and training".

The need for teacher education is felt due to the following reasons;

- It is common knowledge that the academic and professional standards of teachers constitute a critical component of the essential learning conditions for achieving the educational goals of a nation. The focus of teacher preparation had to shift from training to education if it had to make a positive influence on the quality of curriculum transaction in classrooms and thereby pupil learning and the larger social transformation. The aspects that need greater emphasis are;
  - The length of academic preparation,
  - The level and quality of subject matter knowledge,
  - The repertoire of pedagogical skills that teachers possess to meet the needs of diverse learning situations,
  - The degree of commitment to the profession,
  - Sensitivity to contemporary issues and problems and
  - The level of motivation.

This is not possible if teacher preparation focused only on training. Holistic teacher building is necessary and therefore teacher education needed more emphasis than mere training.

- Educating all children well depends not only on ensuring that teachers have the necessary knowledge and skills to carry out their work, but also that they take responsibility for seeing that all children reach high levels of learning and that they act accordingly.

- People come to teacher education with beliefs, values, commitments, personalities and moral codes from their upbringing and schooling which affect who they are as teachers and what they are able to learn in teacher education and in teaching. Helping teacher candidates examine critically their beliefs and values as they relate to teaching, learning and subject matter and form a vision of good teaching to guide and inspire their learning and their work is a central task of teacher education.
- The National Academy of Education Committee's Report wrote that: "On a daily basis, teachers confront complex decisions that rely on many different kinds of knowledge and judgement and that can involve high stakes outcomes for students' future. To make good decisions, teachers must be aware of the many ways in which student learning can unfold in the context of development, learning differences, language and cultural influences, and individual temperaments, interests and approaches to learning". In addition to foundational knowledge about the areas of learning and performance listed in the above quotation, teachers need to know how to take the steps necessary to gather additional information that will allow them to make more grounded judgements about what is going on and what strategies may be helpful. More importantly, teachers need to keep what is best for the student at the centre of their decision making.
- Teacher education like any other educational intervention, can only work on those professional commitments or dispositions that are susceptible to modification. While we can't remake someone's personality, we can reshape attitudes towards the other and develop a professional rather than a personal role orientation towards teaching as a practice.
- The Ministry of Education document "Challenge of Education: A Policy Perspective" has mentioned, "Teacher performance is the most crucial input in the field of education. Whatever policies may be laid down, in the ultimate analysis these have to be implemented by teachers as much through their personal example as through teaching learning processes." India has reached the threshold of the development of new technologies which are likely to revolutionise the classroom teaching. Unless capable and committed are teachers in service, the education system cannot become a suitable and potential instrument of national development.

The teacher is required to acquire adequate knowledge, skills, interests and attitudes towards the teaching profession. The teacher's work has become more complicated and technical in view of the new theories of psychology, philosophy, sociology, modern media and materials.

The teacher can be made proficient with well planned, imaginative pre-service and in-service training programmes.

TRIANGULAR BASIS OF TEACHER EDUCATION

Construction of the relevant knowledge base for each stage of education requires a high degree of academic and intellectual understanding of matter related to teacher education at each stage. This involves selection of theoretical knowledge from disciplines cognate to education, namely, psychology, sociology and philosophy, and converting it into forms suitable for teacher education. Teacher education derives its content from the disciplines of Philosophy, Sociology and Psychology. These disciplines provide the base for better understanding and application of Teacher education. The Philosophical basis provides insights to the student teachers about the implications of- the various schools of philosophy, ancient and modern philosophical thoughts, educational thoughts of philosophical thinkers on education and its various aspects such as curriculum construction and discipline. The Sociological basis helps the student teachers to understand the role of society and its dynamics in the educational system of a nation and the world at large. It encompasses the ideals that influence national and international scenes. The Psychological basis helps the student teachers develop insights into students‘ psychological make-up. This enables the student teachers to understand their self, their students and the learning situations such that they are able to provide meaningful and relevant learning experiences to their students.

ASPECTS OF TEACHER EDUCATION

Teacher education is concerned with the aspects such as:

- Who (Teacher Educator),
- Whom (Student teacher),
- What (Content) and
- How (Teaching Strategy).

Teacher education is dependent upon the quality of teacher educators. The quality of pedagogical inputs in teacher education programmes and their effective utilization for the purpose of preparing prospective teachers depend largely on the professional competence of teacher educators and the ways in which it is utilized for strengthening the teacher education programme. Teacher education, thus, first deals with the preparation of effective teacher educators. Teacher education reaches out to the student teachers by providing the relevant knowledge, attitude and skills to function effectively in their teaching profession. It serves to equip the student teachers with the conceptual and theoretical framework within which they can understand the intricacies of the profession. It aims at creating the necessary attitude in student teachers towards the stakeholders of the profession, so that they approach the challenges posed by the environment in a very positive manner. It empowers the student teachers with the skills (teaching and soft skills) that would enable them to carry on the functions in the most efficient and effective manner. Teacher education therefore pays attention to its content matter.

THE INTERNATIONAL LEVEL

UNESCO

At no time in human history was the welfare of nations so closely linked to the quality and outreach of their higher education systems and institutions.. As the only United Nations agency with a mandate in higher education, UNESCO facilitates the development of evidence-based policies in response to new trends and developments in this field emphasizing its role in achieving the Millennium Development Goals and particularly poverty eradication.

The Organization fosters innovation to meet education and workforce needs and examines ways of increasing higher education opportunities for young people from vulnerable and disadvantaged groups. It deals with cross-border higher education and quality assurance, with a special focus on mobility and recognition of qualifications, and provides tools to protect students and other stakeholders from low-quality provision of higher education. UNESCO promotes policy dialogue and contributes to enhancing quality education, strengthening research capacities in higher education institutions, and knowledge sharing across borders.

Teacher Education

- Global leadership on teachers,
- Their status,
- Their professional training,
- Their management and administration and key policy issues.
- The UNESCO/ILO Recommendations concerning the Status of Teachers and provide the framework for the same.
- The Teacher Training Initiative for Sub-Saharan Africa (TTISSA) is a core initiative addressing key issues in the African context.

WHAT UNESCO IS DOING FOR TEACHER TRAINING-(ROLE AND FUNCTIONS)

UNESCO promotes the development of a professionally-trained corps of teachers who provided the human contact, understanding and judgement necessary to prepare our children for the world of tomorrow.

UNESCO and Teachers

Good teachers are the cornerstone of quality education. On a daily basis, teachers contribute to sustainable development by building its human foundation – nurturing each child‘s capacity and desire to learn. Without teachers, Education for All (EFA) by 2015 would be an unobtainable dream.

Teachers: Creating hope for Tomorrow

- Teachers are at the very heart of UNESCO‘s work. Each day, over 60 million teachers care for 1 billion children, cultivating their souls and minds.

Any process that attempts to improve the quality of education promote peace and harmony and eliminate discrimination requires teachers. Teachers work with children who will be the leaders of tomorrow.

- But for teachers to be effective, they must be well-trained, motivated, have a decent work environment, good pay and an attractive career path. UNESCO enables the world's teachers by building on the standards for the professional, social, ethical and material concerns of teachers set in the 1966 and 1997 recommendation concerning the status of teachers and education personnel.
- There is currently a severe shortage of teachers worldwide. UNESCO helps adjust national policies to reverse teacher flight, teacher drop-out and assists countries with the professionalization of "volunteer" teachers recruited by hard-pressed governments to fill crisis-level gaps.

UNESCO and Teacher Education

- Emphasizing the essential role teacher training and education policy play in national development goals.
- Producing and disseminating policy guidelines on open and distance learning, e-learning, and use of ICTs in teacher education.
- Advocacy to improve the training and status of teachers worldwide.
- Integrating international standards regarding HIV/AIDS and life skills into national teacher education policies.
- Promoting exchange of good national practices and lessons learnt within groups of countries with common teacher-related agendas through networking and exchange.
- UNESCO promotes the development of a professionally-trained corps of teachers who provided the human contact, understanding and judgement necessary to prepare our children for the world of tomorrow.

UNESCO's Teacher Training Initiative in Sub-Saharan Africa

- UNESCO's Teacher Training Initiative is a new 10-year project to dramatically improve teacher training capacities in 46 sub-Saharan countries.
- The programme is designed to assist countries to synchronize their policies, teacher education, and labour practices with national development priorities for Education for All and the Millennium Development Goals (MDGs) through a series of four-year cycles.

Teacher Training for the Achievement of Education for All

- The acute shortage of qualified teachers has been identified as one of the biggest challenges to EFA. If EFA is to be achieved by 2015, then between 15 and 30 million more teachers are needed worldwide. In sub-Saharan Africa, 4 million additional teachers will be needed by 2015 to meet the goal of Universal Primary Education alone. Additional teachers will be needed for non-formal education and literacy training, as well as in-service training of teachers.

- UNESCO recognizes that teacher education is integrally related to quality education and closely linked to curriculum renewal, improved learning outcomes, and a positive school environment. At the end of four years, each country participating in the Teacher Training Initiative is expected to integrate a comprehensive teacher education plan into the national education plan, improve the quality of training in teacher education, address the issues of severe teacher shortage and the status of teachers, and implement an internationally prescribed standard and national policy regarding HIV prevention education.

CHECKING YOUR OWN EDUCATIONAL PHILOSOPHY AND SUPERVISORY BELIEFS

Directive supervision is based on the belief that teaching consists of technical skills with known standards. In this model the supervisor job is to inform, direct, model and assess the competencies of the teachers. The supervisor is seen to have more responsibility that the teacher. Collaborative supervision is based on the belief that teaching is a problem solving activity. The supervisor's role is to guide the problem solving process. The supervisor and the teachers are seen as equals. Non-directive supervision is based on the belief that learning is a private experience where students come up with their own solutions. The supervisor listens and is nonjudgmental and provides clarification for teachers. The supervisor is seen to have less decision making responsibility than the teacher.

PROFESSIONAL DEVELOPMENT FOR COOPERATING TEACHERS IN INDIA

There is a growing realization that professional development for teachers can be aided by strengthening and expanding "models of international exchange that build lasting cross-national partnerships among educational institutions with common interests and complementary objectives" (Riley 2000).

One of the acknowledged areas of need is promoting greater sensibility to cultural differences (Dunn 1997; Zimpher and Ashburn 1992). Study-abroad programs increase openness to diversity and intercultural competence (Akande and Slawson 2000). Student teaching placements overseas will provide an opportunity for preservice teachers to explore and analyse their philosophy and methods of teaching in a new and different environment, enabling them to see themselves as professionals in a global context.

Opportunities for professional overseas experience for preservice teachers have been limited. International education has, until recently, focused on schools and general higher education. It is only in the past decade or so that teacher education has been given much attention.

As an indication of the interest in teacher education, an international directory of teacher education institutions, the first of its kind, was published recently (International Council on Education for Teaching 1999). At the institutional level, the international perspective on teacher education has taken the form of

student teaching-abroad programs in which student teachers spend either a part or the entire student teaching period in a country of their choice. Until recently, for student teachers from the United States, this has been limited to countries in Europe or Australia. Asia and Africa have not been of great interest particularly because of the language barrier student teachers may face in the classrooms.

PROFESSIONAL PROSPECTS FOR TEACHERS

It requires organisation to place highly qualified teachers in every classroom. To achieve this goal, policies concerning time for professional development must change. In *What Matters Most: Teaching for America's Future*, the National Commission on Teaching investment relationship between teacher knowledge and skills and student achievement: "Teacher expertise is the most important factor in student achievement".

How much professional development time is *enough* to meet today's high expectations for teachers and students? Although there is no clear answer to this question, the need for time is real. As per recommendations at least 25 percent of an educator's time be devoted to professional learning. Such time is essential for mastering and incorporating new practices into classroom instruction. Darling-Hammond (1999) contends that it is unrealistic to expect teachers to learn how to incorporate complicated practices into their instructional design after only a few hours of training. Canady and Rettig (1995) suggest that schools schedule at least five, and preferably 10, days of workshops when implementing major instructional changes.

In USA the National Education Commission on Time and Learning (1994) also uncovered some premises known by educators to be false. One that relates to structure is "the myth that schools can be transformed without giving teachers the time they need to retool themselves and reorganize their work". In its discussion of obstacles to continuous school improvement, the commission stated, "Both learners and teachers need more time—not to do more of the same, but to use all time in new, different, and better ways. The key to liberating learning lies in unlocking time".

The media is quick to use the international assessments—such as the Trends in International Mathematics and Science Study (TIMSS) and the Programme for International Student Assessment (PISA)—to compare U.S. test scores to those of other nations. Yet little is shared with the American public about how much time is scheduled for collaboration, training, and planning in many other nations. U.S. teachers spend more than 1,000 hours teaching per year while Asian and European teachers spend 600 to 800 hours teaching per year. Missing from U.S. teachers' schedules is the time to acquire new pieces of knowledge; develop new skills; collaborate, coordinate, and plan with others; create and align curriculum to standards; observe other teachers; and self-reflect and evaluate.

According to Black (2003), policymakers must address the need for additional funding to remedy the lack of time for quality professional development in

order for today's educational system to make continuous improvement. Yet the creation of different professional development structures will not in and of itself guarantee improved test scores. Very little will change in a school's classrooms without a data-driven, coordinated, focused plan; multiple-year support (job-embedded coaching, reflection, and feedback); and administrative follow-up and accountability planning.

The implementation of new instructional strategies increases and improves through accompanied observation and feedback. Observation of master teachers using desired instructional methodologies and peer-to-peer feedback—whether in the form of critical friends, cognitive coaching, or a less formal program—are effective for improved faculty performance. Because both observation and feedback require teachers to leave their classrooms, most districts support this form of professional development through the use of substitute teachers. Teachers restructure their instructional day to allow as many visits or demonstrations as possible while substitutes move from room to room.

All these topics and concerns are equally important to policymakers, educational leaders, and teachers. And, as these groups address these matters, they ask important questions: What are others doing to create time for faculty and staff professional development? When do teachers find the time to think aloud together, to create, to change, to integrate new knowledge and methodologies? Among the emerging answers are the following strategies.

STEPS TO TACKLE TEACHER ABSENTEEISM

Teacher absenteeism is one of the major areas of concern for educational administrators and planners. This has a direct bearing on enrolment, retention and quality of learning. The Shiksha Karmi Project which was launched in Rajasthan with assistance from SIDA in the year 1987 to revitalise and expand primary education in remote and backward villages has been successful in tackling the problem of teachers absenteeism by providing specially selected local youth, who work as para teachers, with vigorous training and continuous support. Community participation has been elicited on a large scale for project activities.

The basic assumptions, concept, and strategies of SKP stand validated. Shiksha Karmis have earned the respect and recognition of the village community and their peers. The SK Schools are running regularly, enrolment and retention has increased substantially and educational attainments of the children have shown significant improvement. The success of this project has already prompted other States to send their teams to Rajasthan and see if it could be replicated in their States to tackle the problem of teacher absenteeism. Shiksha Karmi Project is a fine example of international cooperation in the field of basic education and Swedish International Development Agency is bearing 50% of the expenditure on the project. The balance 50% is being borne by the Government of Rajasthan. During the IX Plan period it is proposed to explore the possibility of launching similar projects in other educationally backward States with the

help of international aid agencies, central assistance and contributions by State Governments. A, provision of Rs.50 crore is being made for this purpose.

TRAINING OF TEACHERS IN SPECIALISED AREAS

With increasing specialisation there is a need and demand for training of teachers in specialised areas such as pre-school education, vocational education, physical education, special education for disabled children, mathematics teaching, environmental studies, etc. In order to make upper primary education effective in terms of quality, it is necessary to move from the class room teachers system (which is quite appropriate at the primary stage) to the subject teacher system especially in curriculum area like Science, Mathematics, English (they, are applicable), Physical Education, Art Education, and work experience. Instituting a specialisation course in primary education and primary teacher education in selected faculties of education in the universities and in certain selected colleges of education. It is proposed that selected DIETs, IASEs & CTEs may be supported for undertaking teacher training in specialised areas indicated above. Central assistance may be provided for this purpose by NCTE during IX Plan.

EDUCATION FOR THE DISABLED CHILDREN

According to the Programme of Action, 1992 there are about 12.59 million children in the age group of 5-18 years for which necessary arrangements have to be made if the targets of universalisation of elementary education (UEE) has to be achieved. There has been a large expansion in the integrated education of disabled children in the common schools as well as in the special school system in the recent years. These efforts have to be intensified after the recent enactment of the Persons With Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 which provides for compulsory access to schools to every disabled child. In order to provide teachers who are fully equipped to meet the educational needs of these children, the nation has to provide Sufficient facilities for training of such teachers.

Present facilities for pre-service and in-service training in the country are not adequate POA (1986) and POA (1992) have therefore emphasised that the task of training of special teachers should be undertaken by various agencies immediately. It is therefore proposed to promote one year B.Ed (spl. education) in selected university departments of education with specialisation in visual disability, speech and hearing disability, multi-category disabilities and integrated education of disabled. One institution in each region of the country may be chosen to specialise in each of these four Categories. Thus in all 16 institutions may be covered under this programme. The identified institutions which are willing to take up such programmes may be given assistance for additional staff, equipment, Curriculum and materials development and contingencies. The estimated expenditure during IX Plan on this component may be about Rs. 10 crores.

TEACHERS' HOUSES IN REMOTE AREAS

As mentioned in para 13, the NPE and POA envisage several steps to improve pay and service conditions of teachers. One of the most important of these pertains to solving the problem of housing of teachers. Lack of proper housing is one of the main reasons for teacher absenteeism in remote rural areas which, in turn, leads to a virtual breakdown of the educational delivery system. A CABE Sub-committee has also gone into the issue of providing housing facilities for women teachers, and its recommendations have been endorsed by the CABE. Pursuant to the recommendations of the above sub-committee, a fully Centrally-assisted programme may be taken up during IX Plan period for construction of Houses for elementary school teachers, Using institutional finance. Modalities of the Scheme could be worked out by involving State Governments and financial institutions. Simultaneously State Governments would be Urged to increase the quantum of House Building Advance available for teachers to enable a larger number of teachers to construct their own houses during their career. An amount of Rs.250 crore is proposed as the Central share for operationalisation of the above scheme during the plan period.

ROLE OF VOLUNTARY AGENCIES IN TEACHER EDUCATION

Several Non Government Organisations (NGOs) are involved in designing and delivering innovative and experimental programmes of primary teacher education in different parts of the country. Externally assisted projects in basic education which include DPEP, Lok Jumbish and Shiksha Karmi Projects have also given new direction to teacher training by introducing decentralised training at block and cluster levels; emphasising child-centred, contextually relevant and joyful learning processes, and incorporating minimum levels of learning in text-books and teacher training. The UNICEF sponsored teacher-empowerment projects in Madhya Pradesh, Rajasthan, Maharashtra and Uttar Pradesh have improved school environment, teacher morale and teaching practices in interior rural primary schools. These projects have also made useful inputs in training trainers and emphasising the importance of 'Shikshak Dharma'.

Some of the successful programmes need to be upscaled and replicated on a wider scale through dissemination, exchange of ideas and experiences and support to NGOs during the Ninth Five Year Plan. For this purpose salient features of experimental and innovative teacher education programme may be summarised as follows:

- Recurrent and rigorous academic training of teachers in a residential situation.
- Emphasis on inputs to facilitate realisation of 'Shikshak Dharma' i.e. the higher moral purpose of teaching as a profession as, a means to bring about attitudinal changes and improve the prevailing work culture.
- Utilisation of educational facilities, including premises of senior, secondary and secondary schools, at block and cluster levels to develop resource centres for professional upgradation of teachers nearer their place of work.

- Careful identification, selection and training of master trainers for imparting high quality and intensive training to primary school teachers.
- Social orientation and sensitisation of teachers to problems of rural schools, disadvantaged sections of society, girls and the) local communities.
- Active participation of teachers in design and development of teacher training programmes, low-cost teaching aids; earring materials, etc.
- Recognition of multigrade and multi-level learning situations in rural schools as challenges to be specially addressed in professional preparation of teachers.
- Emphasis on improving class room teaching practise in tandem with curriculum and materials.
- Evolving training programmes which are participative, trainee friendly and use self/learning training materials.
- Generating community, support and resources to improve the school environment and consequently teachers morale and self-esteem.
- Placing emphasis on improving knowledge and skills of teachers in Science and Mathematics.
- Development of innovative and contextually relevant materials for guiding teachers, supplementing textbooks and enriching the learning process.
- Creation of mechanisms for continuous review, feedback and upgradation of teacher performance.

During the Ninth Plan efforts would be made to strengthen the partnership between government and non-government organisations for promotion and delivery of contextually relevant, innovative and experimental programmes for teacher education. It is expected that this would have a positive impact on teacher morale, motivation and performance. It is envisaged that in backward pockets and tribal areas, where qualified and trained teachers especially women, are not available, services of NGOs could be utilised to provide education and training in a residential situation to local youth to enable them to serve as para-teachers. The Madhya Pradesh Government has launched an entirely new elementary education package from July, 1996 called the 'Sikhna Shikhana' Practice' package, which is activity based, embedded in local culture and environment and joyful. The package has emerged out of a major policy decision by the State Government and intense field work at the grass-root level by governmental and non-governmental agencies working in partnership.

8

Roles for Teacher Leaders

Teacher leaders assume a wide range of roles to support school and student success. Whether these roles are assigned formally or shared informally, they build the entire school's capacity to improve. Because teachers can lead in a variety of ways, many teachers can serve as leaders among their peers.

So what are some of the leadership options available to teachers? The following 10 roles are a sampling of the many ways teachers can contribute to their schools' success.

RESOURCE PROVIDER

Teachers help their colleagues by sharing instructional resources. These might include Web sites, instructional materials, readings, or other resources to use with students. They might also share such professional resources as articles, books, lesson or unit plans, and assessment tools. Tinisha becomes a resource provider when she offers to help Carissa, a new staff member in her second career, set up her classroom. Tinisha gives Carissa extra copies of a number line for her students to use, signs to post on the wall that explain to students how to get help when the teacher is busy, and the grade-level language arts pacing guide.

INSTRUCTIONAL SPECIALIST

An instructional specialist helps colleagues implement effective teaching strategies. This help might include ideas for differentiating instruction or planning lessons in partnership with fellow teachers. Instructional specialists might study research-based classroom strategies (Marzano, Pickering, & Pollock, 2001);

explore which instructional methodologies are appropriate for the school; and share findings with colleagues. When his fellow science teachers share their frustration with students' poorly written lab reports, Jamal suggests that they invite several English teachers to recommend strategies for writing instruction. With two English teachers serving as instructional specialists, the science teachers examine a number of lab reports together and identify strengths and weaknesses. The English teachers share strategies they use in their classes to improve students' writing.

CURRICULUM SPECIALIST

Understanding content standards, how various components of the curriculum link together, and how to use the curriculum in planning instruction and assessment is essential to ensuring consistent curriculum implementation throughout a school. Curriculum specialists lead teachers to agree on standards, follow the adopted curriculum, use common pacing charts, and develop shared assessments.

Tracy, the world studies team leader, works with the five language arts and five social studies teachers in her school. Using standards in English and social studies as their guides, the team members agree to increase the consistency in their classroom curriculums and administer common assessments. Tracy suggests that the team develop a common understanding of the standards and agrees to facilitate the development and analysis of common quarterly assessments.

CLASSROOM SUPPORTER

Classroom supporters work inside classrooms to help teachers implement new ideas, often by demonstrating a lesson, coteaching, or observing and giving feedback. Blase and Blase (2006) found that consultation with peers enhanced teachers' self-efficacy (teachers' belief in their own abilities and capacity to successfully solve teaching and learning problems) as they reflected on practice and grew together, and it also encouraged a bias for action (improvement through collaboration) on the part of teachers. (p. 22)

Marcia asks Yolanda for classroom support in implementing non-linguistic representation strategies, such as graphic organizers, manipulatives, and kinesthetic activities (Marzano et al., 2001). Yolanda agrees to plan and teach a lesson with Marcia that integrates several relevant strategies. They ask the principal for two half-days of professional release time, one for learning more about the strategy and planning a lesson together, and the other for coteaching the lesson to Marcia's students and discussing it afterwards.

LEARNING FACILITATOR

Facilitating professional learning opportunities among staff members is another role for teacher leaders. When teachers learn with and from one another, they can focus on what most directly improves student learning. Their professional learning becomes more relevant, focused on teachers' classroom

work, and aligned to fill gaps in student learning. Such communities of learning can break the norms of isolation present in many schools. Frank facilitates the school's professional development committee and serves as the committee's language arts representative. Together, teachers plan the year's professional development programme using a backmapping model (Killion, 2001). This model begins with identifying student learning needs, teachers' current level of knowledge and skills in the target areas, and types of learning opportunities that different groups of teachers need. The committee can then develop and implement a professional development plan on the basis of their findings.

MENTOR

Serving as a mentor for novice teachers is a common role for teacher leaders. Mentors serve as role models; acclimate new teachers to a new school; and advise new teachers about instruction, curriculum, procedure, practices, and politics. Being a mentor takes a great deal of time and expertise and makes a significant contribution to the development of a new professional.

Ming is a successful teacher in her own 1st grade classroom, but she has not assumed a leadership role in the school. The principal asks her to mentor her new teammate, a brand-new teacher and a recent immigrant from the Philippines. Ming prepares by participating in the district's three-day training on mentoring. Her role as a mentor will not only include helping her teammate negotiate the district, school, and classroom, but will also include acclimating her colleague to the community. Ming feels proud as she watches her teammate develop into an accomplished teacher.

SCHOOL LEADER

Being a school leader means serving on a committee, such as a school improvement team; acting as a grade-level or department chair; supporting school initiatives; or representing the school on community or district task forces or committees. A school leader shares the vision of the school, aligns his or her professional goals with those of the school and district, and shares responsibility for the success of the school as a whole. Joshua, staff sponsor of the student council, offers to help the principal engage students in the school improvement planning process. The school improvement team plans to revise its nearly 10-year-old vision and wants to ensure that students' voices are included in the process. Joshua arranges a daylong meeting for 10 staff members and 10 students who represent various views of the school experience, from non-attenders to grade-level presidents. Joshua works with the school improvement team facilitator to ensure that the activities planned for the meeting are appropriate for students so that students will actively participate.

DATA COACH

Although teachers have access to a great deal of data, they do not often use that data to drive classroom instruction. Teacher leaders can lead conversations

that engage their peers in analyzing and using this information to strengthen instruction. Carol, the 10th grade language arts team leader, facilitates a team of her colleagues as they look at the results of the most recent writing sample, a teacher-designed assessment given to all incoming 10th grade students. Carol guides teachers as they discuss strengths and weaknesses of students' writing performance as a group, as individuals, by classrooms, and in disaggregated clusters by race, gender, and previous school. They then plan instruction on the basis of this data.

CATALYST FOR CHANGE

Teacher leaders can also be catalysts for change, visionaries who are "never content with the status quo but rather always looking for a better way" (Larner, 2004, p. 32).

Teachers who take on the catalyst role feel secure in their own work and have a strong commitment to continual improvement. They pose questions to generate analysis of student learning.

In a faculty meeting, Larry expresses a concern that teachers may be treating some students differently from others. Students who come to him for extra assistance have shared their perspectives, and Larry wants teachers to know what students are saying.

As his colleagues discuss reasons for low student achievement, Larry challenges them to explore data about the relationship between race and discipline referrals in the school. When teachers begin to point fingers at students, he encourages them to examine how they can change their instructional practices to improve student engagement and achievement.

LEARNER

Among the most important roles teacher leaders assume is that of learner. Learners model continual improvement, demonstrate lifelong learning, and use what they learn to help all students achieve.

Manuela, the school's new bilingual teacher, is a voracious learner. At every team or faculty meeting, she identifies something new that she is trying in her classroom.

Her willingness to explore new strategies is infectious. Other teachers, encouraged by her willingness to discuss what works and what doesn't, begin to talk about their teaching and how it influences student learning. Faculty and team meetings become a forum in which teachers learn from one another. Manuela's commitment to and willingness to talk about learning break down barriers of isolation that existed among teachers.

Roles for All

Teachers exhibit leadership in multiple, sometimes overlapping, ways. Some leadership roles are formal with designated responsibilities. Other more informal roles emerge as teachers interact with their peers. The variety of roles ensures

that teachers can find ways to lead that fit their talents and interests. Regardless of the roles they assume, teacher leaders shape the culture of their schools, improve student learning, and influence practice among their peers.

THE JOB OF A TEACHER

The word *teach* is unhelpfully ambiguous. It can refer to our all-encompassing job as educator in the broadest sense (we are all teachers). It can refer to different kinds of approaches (teach by questioning, teach by telling). And it can imply a range of purposes (inform, expand awareness, develop performance ability). It can even refer to isolated teacher behaviour, irrespective of the results, as in the old joke, "I taught them, but they didn't learn." So how should we best clarify the job of the teacher?

Backward design suggests one answer. The teacher's role, behaviour, and strategies must stem deliberately from established mission and goals, the curriculum, and agreed-upon learning principles. In other words, the particular approaches, methods, and resources employed are not *primarily* subjective "choices" or mere matters of style. They logically derive from the desired student accomplishments and our profession's understanding of the learning process. We teach to cause a result. Teaching is successful only if we cause learning related to purpose.

More specifically, we can distinguish mandatory from optional teacher roles and approaches by recalling the categorization of intellectual goals. Mortimer Adler, in *The Paideia Proposal* (1982), presents us with three broad categories of instructional roles for teachers related to these intellectual goals: (1) didactic (or direct) instruction, (2) facilitation of understanding and related habits of mind, and (3) coaching of performance (skill and transfer). (See Adler's *The Paideia Programme* [1984] and follow-up volumes for further insight into the rationale for the three categories and how to decide what kind of teaching best suits what kind of objective.)

Didactic/direct instruction. In this role, the teacher's primary goal is to *inform* the learners through explicit instruction—that is, telling and lecturing, supplemented by textbooks and demonstrations.

Facilitation of understanding. Facilitative teaching seeks to help students "construct" meaning and *come to an understanding* of important ideas and processes. Teachers in this role guide student enquiries into complex problems, texts, cases, projects, or situations.

Their principal methods are questioning, probing, and process-related commentary, with little or no direct instruction. Coaching performance. Coaching seeks to support the learners' ability to *transfer* their learning to succeed in complex and autonomous performances. The teacher/coach establishes clear performance goals and then supervises the development of skills and habits through ongoing opportunities to perform, accompanied by specific feedback and modeling. We show how the three roles relate to examples of specific instructional methods and the concomitant learner actions for each.

Table. Teacher Roles and Related Learner Actions

Teacher Role (Method the Teacher Uses)	**Learner Actions (What Students Need to Do)**
Didactic/Direct Instruction	Receive, Take In, Respond
• Demonstration, modeling•	Observe, attempt, practice, refine
• Lecture•	Listen, watch, take notes, question
• Questions (convergent)•	Answer, give responses
Facilitation of Understanding	Construct, Examine, Extend Meaning
• Concept attainment•	Compare, induce, define, generalize
• Cooperative learning•	Collaborate, support others, teach
• Discussion•	Listen, question, consider, explain
• Experimental enquiry•	Hypothesize, gather data, analyze
• Graphic representation•	Visualize, connect, map relationships
• Guided enquiry•	Question, research, conclude, support
• Problem-based learning•	Pose/define problems, solve, evaluate
• Questions (open-ended)•	Answer and explain, reflect, rethink
• Reciprocal teaching•	Clarify, question, predict, teach
• Simulation (*e.g.*, mock trial)•	Examine, consider, challenge, debate
• Socratic seminar•	Consider, explain, challenge, justify
• Writing process•	Brainstorm, organize, draft, revise
Coaching	Refine Skills, Deepen Understanding
• Feedback/conferencing•	Listen, consider, practice, retry, refine
• Guided practice•	Revise, reflect, refine, recycle through

The implication should be clear from these categories: there is no one *best* teaching approach. Rather, the choice of a pedagogical method or a particular instructional move should be determined by what the desired results imply and thus what kind of help and experience the learners need.

When the learning goal requires information cast in a helpful way, use didactic teaching approaches. When the goal is to ensure that ideas are understood and misconceptions overcome, facilitate student discussions and enquiries so that students come to see for themselves. When the aim is for the learners to transfer their knowledge and skills to new situations, then coach for the desired performances.

Clearly, then, an effective teacher not only demonstrates skill in all three roles but also understands *when*they should be used, in what combinations, and for how long. That's the *teacher's* transfer task! The decision flows from mission and learning priorities. Yes, there are times when direct telling can be efficient and effective. However, when the learning goals highlight *understanding* and *transfer performances* (as we have stressed in this book), we would logically expect to see an emphasis in the classroom on facilitation of student enquiry and coaching towards transfer performance. So the endless quarrels about "which teaching method is best" miss the point entirely. There is no unqualified answer; there is no "politically correct" response. The question about how to teach always demands an "if, then" answer; it's completely dependent on desired results.

So we must begin our thinking about any upcoming teaching with an essential question: Given the learning goals that have priority, what is the best use of *inherently limited* class time, in terms of "teacher" and "learner" roles? What should teachers and learners be doing inside class (and outside class) to best accomplish those aims? What form of interaction between learners, materials, and teacher—in what balance of time—offers the greatest likelihood of achieving the various explicit results related to mission? What are the highest-leverage actions we as educators can take to cause important changes in learners? These questions typically go begging in classrooms as habits take over.

Let's look more closely at teaching as facilitation and as coaching to better understand these two roles and why they are so vital in teaching for understanding and transfer.

Teacher as Facilitator

In the Paideia framework, Adler proposes that, in addition to being a teller and a coach, a teacher can facilitate understanding through a (Socratic) seminar format in which great books and ideas are discussed collaboratively. During a seminar, the teacher plays the role of questioner, prober, devil's advocate, and includer. In this role, teachers rarely give their opinions but strive to evoke the thinking of the student participants. In addition to Socratic seminars, many other kinds of inductive, facilitated experiences have been used for years. Indeed, the case method in law, problem-based learning in the sciences and medicine, and the seminar in the humanities are time-honoured approaches to facilitating learning for understanding.

More generally, understanding requires proactive development and testing of ideas by the learner. Whether in responding to a text, an experience, a problem, or a case study, the students are charged with making meaning of deliberately ambiguous content and the open-ended questions involved.

But there is no meaning for students to make if the design does not clearly establish opportunities and incentives to try to make sense of things. The facilitator has two jobs, then: the first is to artfully set up the proper situations for students to try out and test ideas collaboratively and individually—through questions or problems, for example; the second is to moderate the enquiry and resist the urge to "teach" (a very hard habit to break!). To describe the case study method, a Harvard business professor wrote:

Teachers... are particularly beset by the temptation to tell what they know.... Yet no amount of information, whether of theory or fact, in itself improves insight and judgement or increases ability to act wisely. (Gragg, 1954, p. 8)

Practically speaking, students and teachers must all learn to recognize that when facilitation of understanding is taking place, *conventional* "teaching" and "learning" will be suspended. The teacher will continually have to make clear—via the design of enquiry and reference to appropriate rules and norms—that new and perhaps unfamiliar practices and roles will be governing the classroom experience.

Here is a simple example of the kind of small but profound change in classroom dynamics that reflect facilitative teaching. All facilitators of seminars know that students have to be made conscious of their tendency to be passive, to constantly wait for the next "move" to come from the teacher. The most obvious indicator of this problem is what happens when a student contributes to a teacher-led discussion in a typical class: all eyes immediately and unconsciously go back to the teacher following a student's response. (Look for this in class visitations.) It is a deeply engrained habit: teachers and students fall into the trap of thinking that the teacher's job is to respond as a "teacher" to each student's comment. But this pattern is upended in a seminar, because the teacher's job is to encourage learners *not* to wait for teacher responses and to actively respond to the comments of fellow students.

In other words, a facilitator's job is to bring people in and keep everyone questioning and responding. Over the long term, the teacher/facilitator is needed less and less because students become better at managing the process of collaborative enquiry on their own—what we like to call "intellectual Outward Bound." But it takes discipline and explicit training to break the many common habits and familiar routines associated with "sit and get" learning.

Small-group seminars are not the only place for such facilitation. Here is an example from a large lecture course at the college level:

[In psychologist Donald Dansereau's classes at Texas Christian University] after fifteen to twenty minutes of lecture, students are paired by the teacher so that teammates vary from one class session to the next. Students review class notes, taking turns as recaller-summarizer and checker. The recaller summarizes the content of the prior lecture segment and the checker assesses the summarizer's accuracy and detail. After determining the accuracy of the notes, students jointly work on developing strategies that will help them remember the content, such as constructing examples and developing mnemonic or memory devices to assist in long-term retention.

Although it is among the oldest of methods (think Socrates!), facilitative teaching is being enhanced by technology. Here is an account from the *Boston Globe* newspaper of the ever-growing use of a computerized student-response system using handheld "clickers": Hoping to make large classes more interactive, a growing number of professors on large campuses are requiring students to buy wireless, handheld transmitters that give teachers instant feedback on whether they understand the lesson—or whether they're even there.

Use of the $36 device has exploded this fall at the University of Massachusetts, where faculty say class sizes are creeping up following $80 million in system-wide budget cuts. Close to 6,000 of the 17,500 undergraduates on the Amherst campus are required to have transmitters in classes this fall, compared with fewer than 500 two years ago, said Richard Rogers, an economics professor and adviser to the provost on the classroom experience. To connect with students in vast auditoriums, professors sprinkle multiple-choice questions through their lectures. Students point and click their transmitters to answer, pushing blue

buttons numbered 1 through 9 on their keypads. A bar graph appears on the professor's laptop, showing the number of right and wrong answers; teachers can slow down or backtrack when there are too many wrong answers. Each device is registered and assigned a number, so professors can check who is present, and reach out after class to those who give wrong answers frequently.

Consider the implication about learning in these examples. Whether in small seminars or large lectures, students are guided to actively process information and test their understanding rather than simply listening and taking notes. Facilitative teaching rests on the common belief that learners can develop understanding (even in large lecture courses) only by being asked to continually question and rethink their answers in light of feedback in order to make sense of ideas. This is not time "lost" from "teaching" but time well spent in causing learner understanding.

Let's generalize. Regardless of the setting, what do the best facilitators do? They:

1. Set up issues, problems, and investigations for enquiry and discussion.
2. Guide the learners in "making meaning."
3. Refrain from excessive instruction.
4. Model and encourage the use of strategies and habits of mind.
5. Work to make themselves unneeded.

Let's briefly examine each of these characteristics of facilitators.

1 Set up issues, problems, and investigations for enquiry and discussion. A major goal of facilitation involves the development and deepening of student understanding. To this end, skillful facilitators select provocative issues to explore and debate, worthy texts to interpret, significant investigations to conduct, and challenging problems to tackle. With these intellectual challenges as the grist for understanding, the facilitator's job is to ensure that students generate, test, probe, and adjust ideas via peer feedback and salient results.

2. Guide the learners in "making meaning." The understandings of an expert simply cannot be passed on verbally. Thus, the learner's job is to actively try to construct meaning and make sense of things, and the facilitator's job is to assist this construction process.

3. "But isn't content being sacrificed?" No. This is a basic misconception about facilitative instruction. Just because all related content isn't being didactically "taught" doesn't mean that the content isn't being learned—namely, through student attempts to use what they have thus far encountered in and out of class. Here is what Harvard physics professor Eric Mazur (1997) has to say about his long-term research on how best to structure his use of time in a large class by doing "less" teaching and more facilitation of understanding through diagnostic assessment and discussion:

   The basic goals... are to exploit student interaction during the lectures and focus student attention on key concepts. Instead of presenting the level of detail covered in the textbook or lecture notes, lectures consist of a number of short presentations on key points, each followed by a

ConcepTest—short conceptual questions on the subject. The students are first given time to formulate answers and then asked to discuss their answers with each other.

Answers are tallied, and Mazur continues with the lecture if the results indicate understanding and shifts gears if the results are weak. In this approach, these instant-feedback tests and discussion "take one third of each lecture period". In so doing, "it is possible to greatly improve student performance on [concept tests] and conventional examinations," a claim backed by years of formal research by Mazur and his colleagues. As Mazur (1997) says elsewhere, "No lecturer, however engaging and lucid, can achieve this level of improvement and participation simply by speaking."

4. Refrain from excessive instruction. Thus, a facilitative role relocates the teacher from being only a "sage on the stage" to being a "guide on the side," from mostly telling to eliciting the making of meaning and the testing of ideas. A facilitator moderates discussions and guides enquiry without being an intrusive or directive participant. Instead of giving talks and answers, facilitators question, clarify, and comment on process and the state of the enquiry.
5. Model and encourage the use of strategies and habits of mind. The open-ended nature of enquiry-based learning can be unsettling, especially to dutiful students who have come to expect clear directions from the teacher. The facilitator also models and encourages the use of strategies and habits of mind when learners encounter difficulties in the course of their enquiry, answering questions such as these: What do you do when you don't understand the text? What strategies can help when you've hit the wall during problem solving? How do you respond when your best ideas are challenged?
6. Work to make themselves unneeded. Unlike traditional instruction in which the teacher takes center stage, facilitators seek to progressively develop student autonomy over time (the intellectual Outward Bound we referred to earlier). In other words, they work at making themselves increasingly unneeded. This outcome typically comes about through a systematic "weaning" process during which teacher directions and support are gradually reduced. Here are specific ways in which teachers promote growing independence:
    1. Encourage students to set personal learning/performance goals related to the overall desired results.
    2. Give students appropriate choices over the processes of learning (for example, working in groups versus working alone) and their products (for example, visual, verbal, written).
    3. Expect students to regularly self-assess their work and their progress towards explicit goals.
    4. Teach facilitation skills and allot time for students to apply them (for example, via student-led seminars or problem-solving groups).

THE FUNCTION AND THE ROLE OF THE MULTIGRADE TEACHER

It is obvious that a combined class of students differs a lot from the conventional type of a student class of a single grade. That means that the way that the students of the multigrade class should be taught must be different as well. It is true that the function of the teacher in the multigrade classroom is multidimensional or to be more accurate it is much more complicated and demanding than the role of the teacher in the monograde school respectively.

This is the main subject of the MUSE project to assist teacher professionals to be able to work effectively in the multigrade school environment and be trained on teaching in the different ways referring to the multigrade classroom. For children to learn effectively in multigrade environments, teachers need to be well-trained, well-resourced and hold positive attitudes to multigrade teaching. Multigrade teaching in many views represents a more demanding teaching situation and special attention should be given to it. However, many teachers in multigrade environments are either untrained or trained in monograde pedagogy; have few, teaching and learning resources; and regard the multigrade classroom as a poor cousin of the better-resourced monograde urban schools that are staffed by trained teachers. In addition, at the majority of the cases, the multigrade teachers are very young without significant experience, "chosen" by the state to teach at the specific rural areas. These teachers are left alone without resources and support to handle the demanding multigrade classes. The former has serious negative impact on teachers' psychology and attitude towards the multigrade class, and affects in a negative way their teaching performance.

The effort should be focused by the educational authorities to reverse the teachers' negative view for multigrade teaching and the rural school and provide them with the resources and support to be able to overcome any difficulties. Teachers should attend special training programmes before introduce themselves at the multigrade classroom and try to adjust to their multidimensional role as multigrade teachers. A training programme like the MUSE project which represents an effort to address the specialised needs of the multigrade school teachers ought first of all to record and analyse the multiple role that these teachers possess in the multigrade class. Below you can find a first attempt to present the basic functions and roles of the teachers in rural multigrade schools. The categorisation in the different roles presented here are based on similar former research activities, training attempts and documentation found in the literature so are more or less well accepted by the wider educational community. These common functions which multigrade teachers must carry out in their schools are as follows:

AS TEACHER

The main function of the multigrade teacher is to teach students by imparting knowledge not just follow a curriculum. Teacher must be able to develop skills

and inculcate desirable values and attitudes among pupils. The teacher is expected to be versatile and utilize different strategies to make learning meaningful and effective for all students in his or her classroom, no matter what individual differences may exist among the students. In the following section of this web training content you will be able to get informed more specifically on teaching and learning strategies referring to the multigrade setting.

As Facilitator

The teacher should be able to understand differences between pupils, be able to motivate them to learn and guide them though their learning materials. The teacher should be able to do this for all grade levels in the classroom, no matter what curriculum subject is being studied. The teacher should not only be a provider of knowledge but should also be a facilitator of learning both at a group level and on a one-to-one basis.

As a Planner

Planning is a critical function for the Multigrade teacher. Appropriate planning by the teacher will result in classes which are more productive for the learners and easier for them to follow. Planning in the multigrade school classroom is much more important that in a monograde one. The teaching hour must be spent productively for student groups in grades of the class and thus accuracy on time spending is crucial.

Suggestions for activities of a good planner. For each grade level for which you as multigrade teachers are responsible you must determine the answers to the following questions:

- Whom do I teach?
- What must I teach?
- How do I teach?
- When do I teach?
- Why do I teach this?

Once you have determined the answers to these questions, you must then devise an implementation plan in order to achieve the objectives of the lesson for each grade. Such implementation strategies include lesson planning, selection of week activities, time- tabling. All these must be carried out before the actual lesson is given. Try the above in one of your teaching hours. Try to determine a working model for your case based on the above suggestions. Feel free to add or remove questions from this list taking into account the special educational conditions of your professional setting.

As Evaluator

Another role which the multigrade teacher must carry out is to monitor the progress of pupil's learning so as to ensure quality of education.

Therefore, assessment should be considering a continuous and integral part of the teaching process. Usually, this requires teachers to determine the

educational levels of pupils when they first enter schooling, during the school year and at the end of each school year. Therefore, assessment should be considered a continuous and integral part of the teaching process.

TYPES OF ASSESSMENT

Entrance Tests

Entrance tests are usually conducted at the beginning of the schooling process and for new student entries at the class. The purpose of these entrance tests is to determine exactly the educational level of each pupil is. It is as a result of these tests that each pupil can enter or resume his or her studies at the appropriate grade level. More importantly, test results will assist the teacher to identify the particular stage within each grade that individual pupils have attained and therefore help the teacher to provide appropriate individual instruction. Test results may also help to persuade the teacher that the initial allocation of students to grade groups should be altered.

Regular Assessment

Regular assessment is carried out for the same purposes as those described above but is administered routinely through the school year. Such assessment may be carried out daily, weekly or monthly. The frequency of such testing will be determined by the purpose for which it was designed for.

Periodic Assessment

Periodic assessment is often used for specific purposes, such as determining if students have understood a particular topic which has just been completed. Means of assessment include: short tests, topic tests and the use of homework.

Self-assessment and Peer-assessment

It is often possible to ask pupils to assess their own work or the work of their peer group. Alternatively, older students may help the teacher to assess the work of younger pupils. It is often the case the student workbooks are designed for these types of assessment. Suggestions for activities for evaluation and assessment. Try to think of ways that you can develop assessment tools for every one of the above categories. Especially focus on self evaluation and the development of entrance tests.

As Materials Designer

Although various curriculum materials are usually prepared by national educational authorities, multigrade teachers still need to develop their own additional materials. These additional materials serve the purpose of meeting actual and concrete needs of Multigrade teaching within the local context. You should also try to make the national curriculum more relevant to the local needs of the community. Examples of such curriculum materials include the following:

- Designing and making small boards, flash cards, etc. to save time in the classroom and to maximize the time which pupils spend on learning tasks
- Using local materials to develop instructional materials and to encourage students to make their own
- Designing workbooks which are suitable for student use within the local context and conditions
- Including within these locally designed materials and workbooks activities and knowledge which are relevant to the local culture

As Action Researcher

Teachers are not usually trained to be educational researchers, since their main task is to teach. However, it is through research that improvements in teaching take place. In schools where access to other resources is easily available, it is not as critical that individual teachers be researchers since they can easily seek the advice of more experienced educators. However, in Multigrade Teaching schools this advice and resource is not as easily and readily available. Therefore, the Multigrade teacher must also be a researcher, that is, a person who asks questions in order to understand better certain phenomenon. Such research questions include: owhat makes instructional materials and aids useful in teaching and learning in the local context?

- How can the enrolment rate be increased and the drop-out rate reduced?
- What types of games and sports should be played in the school?
- What useful extra-curricular activities can be arranged and when?
- Why certain students are not learning as well as might be expected?
- How to use local resources, including students and monitors, efficiently and effectively?
- What classroom strategies and management enhance learning for different activities?

It is not an expectation that the multigrade teacher become an expert in research methods but, rather, is able to formulate appropriate questions in the classroom setting, seek and obtain the information necessary to answer these questions and be able to put into action those changes which are necessary - all of which is caught up in the term “Action Research”. In summary, the teacher must always have an enquiring and evaluating mind.

As Contact with the Community

In many situations, multigrade teachers, because of their training and position, assume an important position in the local community. This is the case, not only in the eyes of the pupils, but also from the parents’ perspective. Thus, the multigrade teacher is the critical link between the school and its community. The nature of many situations where a multigrade school exists is such that the co-operation and assistance of the local community is needed to improve the quality of educational services that Multigrade Teaching schools provide. This

may include community involvement in such diverse activities as building and maintaining classrooms, assisting in the preparation of curriculum teaching aids and acting as a paraprofessional teacher.

TEACHER AS COACH

Coaches are in business to maximize performance and develop discipline. The coach focuses all efforts on getting the learner to reach a performance standard by designing backward from desired transfer proficiency and the self-discipline (skill and habits of mind) needed. Mortimer Adler (1982) describes this goal and the implications for "teaching":

Since what is learned [in acquiring core intellectual competence] is skill in performance, not knowledge of facts and formulas, the mode of teaching cannot be didactic. It cannot consist in the teacher telling, demonstrating, or lecturing. Instead it must be akin to the coaching that is done to impart athletic skills. A coach does not teach simply by telling or giving the learner a rulebook to follow. A coach trains by helping the learner to do, to go through the right motions, and to organize a sequence of acts in correct fashion. He corrects faulty performance again and again and insists on repetition of the performance until it achieves a measure of perfection.... Only in this way can skill in reading, writing... be acquired.... Only in this way can the ability to think critically—to judge and discriminate—be developed.

Adler's quote could not put the matter more starkly: the overly didactic "teacher" or designer of activities merely offers information and experience, but takes little self-conscious responsibility for *ensuring* that learners learn to be disciplined from the talk or activity, as reflected in learned action and accomplishment.

In contrast, think about highly effective coaches you know or have known. Now consider what they *do* and what they *strive to accomplish*, not what they are like as people—their "coaching" as opposed to their personal traits or style. How do they begin with their charges? How does the coaching unfold over time? What distinguishes their use of time and their work with learners in each session? How do they work effectively with large numbers of learners (such as an orchestra)? What do they do to focus everyone on quality work, regardless of ability level? What strategies do they use to guide and improve performance?

Here are 11 characteristics that we have observed in the best coaching in various fields. How does this list match your observations? The most effective coaches:

1. Establish explicit performance targets clearly related to long-term transfer goals.
2. Show models and exemplars for all goals.
3. Design practice and assess progress backward from the ultimate transfer demands.
4. Assess from the start to see where learners are and what the learning needs to focus on to accomplish goals

5. Devote most time to having learners perform so the coach is freed up to coach.
6. Personalize their coaching, mindful of individual profiles (ability and personality).
7. Provide ongoing feedback and immediate opportunities to use it.
8. Provide "just-in-time" instruction in small, focused doses.
9. Adjust plans in light of unexpected or inappropriate results.
10. Strive to make learners autonomous, thus making self-assessment and self-adjustment a key goal of teaching.
11. Set high standards, but design the work so that learners come to believe "I can do this!"

Let's explore each of these coaching roles in more a bit more detail.

1. Establish explicit performance targets clearly related to long-term transfer goals. Effective coaches ensure that everyone has clarity about the desired performance results. There is no mystery about what learners are trying to achieve or what "success" looks like. Thus, you rarely hear athletes or band members ask, "Why are we doing this?" or "What should my work look like?" Contrast this clarity with the experience of many students, who do not know the learning goals they are expected to attain, the ways in which their learning will be assessed, the instructional methods by which their learning will be supported, or their role as a learner in the process. Lack of clarity on any of these points can diminish student motivation and achievement.
2. Show models and exemplars for all goals. If we seek exemplary performance, the learner must know what exemplary performance looks like. Recognizing this, effective coaches make the "invisible visible" through countless models and examples. The basketball coach shows videotapes of the games of championship teams so that players can see excellence in action. The yearbook sponsor has the staff review award-winning yearbooks from previous years and challenges them to produce a better one for their graduating class. Yet how many history teachers do you know who show students examples of experts' critical examinations of historical artifacts? How many teachers of science do you know who routinely distribute and discuss excellent laboratory reports *before* students begin their lab work?
3. Design practice and assess progress backward from the ultimate transfer demands while providing multiple opportunities to learn and apply the same skill in context. The nature of "practice" distinguishes effective coaches of performance from teachers who ask students to merely complete drills. The coaches have their charges place emphasis on authentic performance in context, rather than focusing on discrete skills practiced in isolation. Coaches always focus the "sideline drills" on improving performance in the game.
4. Consider the U.S. Soccer Federation (USSF) guidelines for coaching youth soccer. In each practice in which a specific skill is to be learned,

a progression (derived backward from game performances) is used: (1) practice the technique; (2) practice the technique in *game-related*conditions (with token opposition in pairs, for example); (3) practice the skill in *gamelike*conditions (with more realistic complexity and opposition); and then (4) practice the skill under *game conditions* in a scrimmage in which the focus is on the skill being used. The mantra in soccer coaching is "The game is the best teacher.... Our coaching school instructors often talk about 'specificity of training.' They want to make certain that training accomplishes the objective of highlighting a skill or tactical factor in a way that is demanded by a real match". The federation's materials underscore the point: "The game will tell you what the team needs to practice. We say that the game and training have a reciprocal effect. The game indicates what we need to train for, and in training we prepare for the game". We contend that the same logic applies to academic areas in which transfer performances are also desired.

5. Assess from the start to see where learners are and what the learning needs to focus on to accomplish goals. Athletic coaches, sponsors of extracurricular activities, and performance-based teachers (for example, in art and technology) recognize that before you begin teaching, you need to find out the knowledge and skill levels of the learners in light of goals. Indeed, coaches of all stripes routinely begin their "season" with diagnostic assessments, because it is crucial to get to know the strengths, desires, and needs of each player.
6. Devote most time to having learners perform so the coach is freed up to coach. A coach doesn't merely teach learners how to perform. The essence of coaching is to set up conditions whereby learners must constantly try and display what they have (or have not) learned for a period of time, through self-sustaining activities, so that they can be coached.
7. An illustration of this approach was documented in a yearlong study of John Wooden, the legendary UCLA basketball coach whose approach we've cited previously. When researchers carefully observed Wooden's coaching methods in order to tease out the "secrets" of his success, they noted an extraordinary pattern that they took to calling a "Wooden":

   There were no lectures and no extended harangues. None. Not one in all the months they observed.... He seldom praised or scolded. Ten percent of his instruction was a "Wooden"—show the model, identify the player's non-example, re-show the model.

   Ted Sizer (1984) suggests the same approach applied to academics: "The material of coaching is the *student's work*, in which skill is displayed for a teacher to assess, give feedback to, and give advice for improvement". This is a crucial distinction. The "teller" thinks the best

use of class time is to share knowledge, cover content, inform the student. The "coach" thinks the best use of limited time is for the learner to try to learn and apply that learning in front of the coach, so that feedback and guidance can be given to improve performance. Too few teachers spend considerable time watching students try to perform and trying to "get into their heads as they work" (for example, by having learners think aloud while engaged in a task). In designing backward from transfer, we use class time *primarily* to better understand what happens when learners *try* to transfer, and we take effective steps to improve the methods and the transfer. Otherwise, any "teaching"—no matter how sound and clearly presented—remains abstract and unlikely to transfer into action.

8. Personalize their coaching, mindful of individual profiles (ability and personality). The best coaches know their players inside and out as learners and as people. They know who needs a kick in the butt and who needs TLC to perform their best. How do they do it? By freeing themselves up to study learners trying to learn, to figure out their strengths, to watch how they react to adversity, and to observe how well they adjust based on feedback. (How many teachers keep a record in their gradebook of student behaviour and attitude related to tackling their work in class, to capture their intellectual profile as a learner? If a big chunk of time every day is given over to students trying to use their learning, this is not only feasible but effective.)
9. Effective coaches identify the positions and roles that play to the strengths of various team members without sacrificing common standards. The slow and heavyset boy has a place on the football team, as does the short and swift boy. We need flutes and tubas to round out the sound range in the orchestra. Prima donnas and shy stagehands work together to pull off a successful play. Not everyone has to learn the same skills in the same way to become competent on the field.
10. Similarly, a key to personalization in the classroom is to ensure that we design complex "work" involving different roles for learners. In this regard, Carol Ann Tomlinson (1999), an expert in differentiated instruction, advises that learners need "respectful tasks" that both challenge them and allow them to work in ways that reflect their readiness levels, interests, and styles of learning. Given individual differences, a one-size-fits-all approach is unlikely to maximize performance for all—on the field or in the classroom.
11. Provide ongoing feedback and immediate opportunities to use it. The mantra here is "less teaching, more formative assessing." One of the authors was profoundly struck by an experience with his son that illustrates the power of ongoing feedback. We paid for a "pitching clinic" for Little Leaguers at a local college, hosted by its highly successful varsity baseball coach. We were there for five hours, but

only about one hour was spent in formal teaching. The bulk of the clinic involved the young pitchers pitching and receiving feedback and advice as they did so from the coaching staff. The last activity involved looking at videotape of each youngster, quickly edited down during lunch by the staff to highlight strengths and weaknesses in each learner's performance, followed by a single personalized piece of advice by the coach. The boys were absolutely riveted, even when the focus was not on them. On the drive home, I asked, "So, what did you think of the clinic?" My son answered, "It was fantastic! That's the longest I have ever listened to adults without getting bored!" In addition to their attentiveness, it was clear that each boy improved, on the spot, and left charged up. How often can we say that about our students in school?

12. Provide "just-in-time" instruction in small, focused doses. In a coaching context, the timing of direct instruction and focused practice is based on results. As soccer coaches say, "The game is the teacher." Just-in-time teaching means we do not frontload lots of content out of context—what might be called "just-in-case" teaching, which leads to the amnesia that plagues so much of conventional education. If your goal is to learn how to cook, you would undoubtedly be frustrated if you were obliged to sit through 30 lectures about every aspect of cooking without ever setting foot in a kitchen and "doing" some cooking with guidance from an expert chef. Yet many courses make this mistake—to the detriment of engagement, as well as results.
13. Just-in-time teaching means, rather, that we judiciously parcel out direct teaching when it is needed and when learners are ready for it. At the extreme end it means completely reversing traditional sequence, as is done in problem-based learning: no direct instruction is imposed until the problem that opens each unit of study is fully explored. Nonetheless, there are times when direct instruction serves the goal of understanding. Research from cognitive psychology affirms this point:
    A common misconception regarding "constructivist" theories of knowing is that teachers should never tell students anything directly, but instead should always allow them to construct knowledge for themselves. This perspective confuses a theory of pedagogy (teaching) with a theory of knowing.... There are times, *usually after people have first grappled with issues on their own*, that "teaching by telling" can work extremely well.
14. Adjust plans in light of unexpected or inappropriate results. A teacher's job is not to *assume*that learning is occurring, based on the teaching. The job is to *ensure* that learning occurs, and when it doesn't, to intervene decisively, quickly, and often. In other words, a key part of a teacher's job is to regularly assess and learn from the results as quickly as possible so as to make the necessary adjustments to improve learning.
15. How many members of the secondary mathematics department say to one another in November, "Gee, we're 2 out of 6 in problem solving.

What should we be doing differently?" How many primary-grade teachers say, "Gee, whatever our beliefs about reading, 14 of our kids cannot read, based on our current approach. What do their struggles tell us we should do differently? Are we on track to realize successful performance by May, and do we have sufficient evidence against end-of-year measures to know?" These are the kinds of questions that coaches regularly ask—and so should every teacher.

16. Consider one direct implication of thinking like a coach: we would build flextime into each unit and the syllabus as a whole for the *inevitable* reteaching and relearning needed. In our experience, this is uncommon. In fact, many teachers overplan their lessons, leaving minimal built-in time for the unavoidable adjustments that will be needed to improve results.
17. Strive to make learners autonomous, thus making self-assessment and self-adjustment a key goal of teaching. The best artists, writers, actors, and athletes are capable not only of being coached but also of internalizing the coaching. The ability to accurately self-assess and self-adjust is critical to maximizing performance, and the same principle applies to school learning. Research in cognitive psychology underscores this point: "Metacognition also includes self regulation—the ability to orchestrate one's learning: to plan, monitor success, and correct errors when appropriate—all necessary for effective learning".
18. Accordingly, effective coaches of performance deliberately engage students in reflecting on their performance. For example, regularly asking learners reflection questions—What worked well? Where are problem areas? How will you apply this feedback? What do you need to work on?—can help cultivate these reflective, metacognitive capacities.
19. Set high standards, but design the work so that learners come to believe "I can do this!"Research on learning reveals important variables that have an impact on students' willingness to put forth effort and persist in demanding learning situations. Those variables include the following: the learner (1) clearly sees the learning goals and understands what is expected, (2) sees the content as relevant and useful to learn, (3) perceives that she is capable of succeeding at the learning tasks, and (4) feels accepted and supported by the teacher.
20. Effective coaches address each of these variables. Indeed, developing intrinsically motivating work in the face of relevant and authentic challenges is the essence of "coaching" for understanding and engagement. John Goodlad (1984) noted this more than 20 years ago in the landmark study *A Place Called School*:

What do students perceive themselves to be learning? We asked [them] to write down the most important thing learned in school subjects.... Most commonly students listed a fact or topic.... Noticeably absent were responses implying the realization of having acquired some intellectual power....

A somewhat different emphasis pervaded the arts, physical education, vocational education and several courses outside the mainstream such as journalism. There was a noticeable shift away from the identification of subjects and topics towards the acquisition of some kind of ability or competence.

This commonsense finding is central to our thesis: work that is more authentic and performance based is inherently more engaging than typical seatwork.

AN EXAMPLE: COACHING CRITICAL THINKING ABOUT CONTENT

Given these various "moves" in effective coaching, let us conclude this section by considering a brief example. What would be a wise use of time in a class if we thought of ourselves as *coaches of critical thinking in the transfer of content* as opposed to just transmitters of content? Here is an example from the content-laden sphere of history.

Have students read, discuss, and summarize the textbook account of the Revolutionary War period using a traditional textbook and companion references. Then ask them to consider two excerpts from *other* countries' textbooks:

As a result of the ceaseless struggle of the colonial people for their political rights, the 13 colonies practiced bourgeois representative government by setting up their own local legislatures. As electoral rights were restricted in many ways in every colony, those elected to the colonial legislatures were mostly landlords, gentry, and agents of the bourgeoisie, without any representation whatsoever from the working people. There were struggles between the Governors and the legislatures. These struggles reflected the contradictions between the colonies and their suzerain state....

The British administration of the colonies was completely in the interests of the bourgeoisie in Britain.... The British colonial rule impeded development of the national economy in North America. It forced certain businesses into bankruptcy. As a consequence, contradictions became increasingly acute between the ruling clique in Britain and the rising bourgeoisie and broad masses of the people in the colonies....

The Declaration of Independence was a declaration of the bourgeois revolution. The political principles enunciated in it were aimed at protecting the system of capitalist exploitation, legitimizing the interests of the bourgeoisie. In practice, the "people" referred to in the Declaration only meant the bourgeoisie, and the "right of the pursuit of happiness" was deduced from the "right of property" and intended to stamp the mark of legitimacy on the system of bourgeois exploitation. The Declaration was signed by 56 persons, of whom 28 were bourgeois lawyers, 13 were big merchants, 8 were plantation slave owners and 7 were members of the free professions, but there was not one representative of the working people.

During the time of the war, America began its westward expansion on a large scale. From the first, the colonies had been founded on the corpses of the Indians.... In 1779 George Washington sent John Sullivan with a force of soldiers to "annihilate" the Iroquois tribe settled in northern New York. In his instructions

he wrote: "The present aim is to completely smash and flatten their settlement, take as many prisoners as possible, the more the better, whether they are men or women.... You must not only mop up their settlement but destroy it." Thus at the time of its founding, America had already nakedly exposed its aggressive character.

After the outbreak of the war, America not only failed to organize the enslaved Negroes but guarded them even more closely, thus intensifying their oppression. This seriously impeded their participation in the war and was one reason why the war for Independence was slow in achieving victory.

What, then, were the causes of the American Revolution? It used to be argued that the revolution was caused by the tyranny of the British government. This simple explanation is no longer acceptable. Historians now recognize that the British colonies were the freest in the world, and that their people had rights and liberties which were enjoyed in no other empire... the British government was guilty of a failure of understand the American situation.

The great majority of colonists were loyal, even after the Stamp Act. They were proud of the Empire and its liberties.... In the years following the Stamp Act a small minority of radicals began to work for independence. They watched for every opportunity to stir up trouble.

Now ask the following question: Given these two "stories" of the same events (the first is from a Chinese textbook; the second, from a Canadian textbook), how should the American Revolution be interpreted from a historical point of view? Where is each textbook account fair and justified, and where might it be biased? How should we best resolve the discrepancies? The skills of considering sources, analyzing arguments, and detecting bias would thus need to be taught and assessed. Indeed, such activities would be used throughout the course, given the express goal of cultivating critical thinking in history. Ultimately, students would be expected, on their own, to use the skills of critical analysis when reading documents as part of their final assessments. In the beginning, we would not assume that students could perform such a task. We would know that our key role is to coach them on how to do such tasks, through skill development and feedback.

In sum, what distinguishes the "teacher as coach" from the "teacher as teller" and "teacher as activity provider" is the overarching commitment to assist with and study the student's attempt to learn and perform with understanding, to enable the student to perform autonomously "with" content, and to be continually confronted with challenges that require critical thinking.

Matching the Approach to the Situation

We agree with Adler that all three categories of teaching—didactic instruction, facilitation, and coaching—come into play in a robust instructional programme. Given the mission and goals advocated in this book, we offer these suggestions:

- Emphasize facilitation when you seek conceptual understanding, the overcoming of misunderstandings, and student construction and testing of key ideas.

- Use coaching when you desire skilled, fluent, and self-disciplined transfer in performance, in response to feedback and advice.
- Offer direct instruction more on a "need to know" basis in light of clear performance goals and feedback from students' attempts to perform with their knowledge.

As a rough rule of thumb, each approach gets about a third of the time in class.

Teacher Misunderstandings

We opened the chapter with the proposition that despite good intentions and diligent efforts, some teachers harbour a fundamental misunderstanding of their job. We now examine three such misunderstandings that, if left unchecked, are likely to undermine the mission of schooling by design.

Misunderstanding 1: "My Job Is to Cover the Content"

Teachers from kindergarten to graduate school wrestle with a common problem—too much content to teach and not enough time to teach it all. In theory, the standards movement promised a solution to the problem of "content overload" by identifying curricular priorities. Content standards were intended to specify what is most important for students to "know and be able to do," thus providing a much-needed focus and prioritization for curriculum, instruction, and assessment. In practice, content standards committees at the national, state, and district levels often worked in isolation to produce overly ambitious lists of "essentials" for their disciplines. Rather than streamlining the curriculum, the plethora of standards and benchmarks contributed to the overload problem, especially at the elementary level, where teachers are charged with teaching standards and benchmarks in multiple subjects.

The matter is further complicated by the propensity of teachers to focus on textbooks as the primary resource for addressing their obligations to the content. Here's a particularly sobering case in point that illustrates the belief that one's job is to cover a textbook. A high school principal asked each department chair to work with members of their departments to develop curriculum maps for each listed course. The intent was to encourage greater uniformity and coherence between and among course offerings. The staff was given the better part of the year to work on the maps. Towards the end of the year, the principal collected and reviewed the maps and was shocked when one department chair turned in photocopies of the tables of contents from the various course textbooks! The sobering part of the story lies in the fact that the department chair was not being rebellious. On the contrary, he and his colleagues actually believed that they were doing what the district expected. After all, they had met to carefully review prospective texts, and the district had invested considerable funds in the purchase of the recommended ones. Surely, they should be using them.

The problem with textbooks lies in part with the propensity of educational publishers to try to "cover the waterfront" in order to appease state textbook

adoption committees, national subject-area organizations, and various special interest groups. The result is often a superficial, "mile wide, inch deep" treatment of subject-matter knowledge.

Nonetheless, the de facto job requirement of teaching to content standards raises an important question regarding the fit between state content standards and a nationally marketed textbook or commercial resource. Consider the exercise that asks teachers to review their textbook against state or district content standards to determine the degree of correlation and then to select best represents that relationship. The point of the exercise is straightforward: in the absence of a perfect correlation, the textbook, at best, should serve as one resource to support learning the standards. Illustrations 2 and 3 suggest that a portion of the textbook's content does not contribute to learning the standards (and thus will not need to be covered), but that other resources will be needed.

Interestingly, when teachers maintain that they are required to march through texts and syllabi (*irrespective* of the degree of student understanding or the learning results), they often cite external pressures from supervisors. Yet we have never been able to trace such reports to the administrative source, nor have we found a supervisor who claimed to have issued such an edict. Moreover, we have never seen a teacher's contract in North America that specifies that a teacher's job is to "cover a textbook." But don't we all know teachers who act as if that is their job, and who resist any suggestions to the contrary?

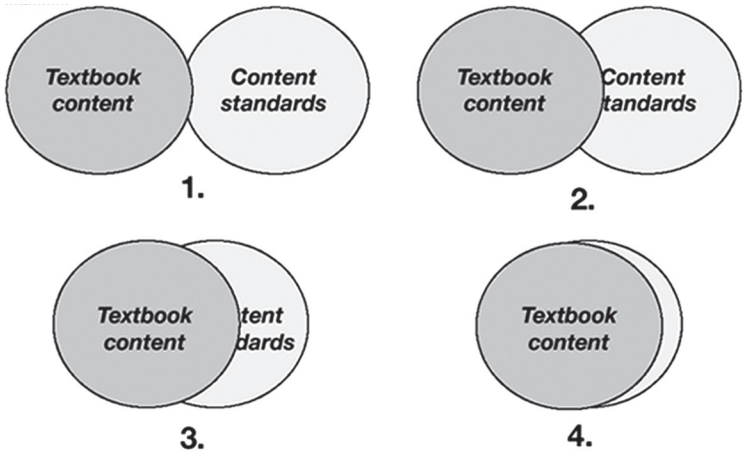

Fig. Correlation Between Textbooks and Standards

Simply put, it is a misunderstanding to claim that one's job is to teach the textbook. The textbook is a reference book. Its purpose—like that of an encyclopaedia—is to summarize knowledge. Treating the textbook as the syllabus is akin to marching through the encyclopaedia from *A* to *Z*. Logical and efficient? Yes. Purposeful, coherent, and effective? Questionable.

Regardless of whether a teacher relies on textbooks, the perceived need to "cover" content is problematic, as a closer examination of the term reveals. The two most common meanings of the term *cover*—to "conceal" (as in cover

up) or to "skim the surface" (like a bedspread)—seem at odds with teaching for understanding and transfer. Indeed, if our intent is to cover more content, we can accomplish this by talking faster in class! But "teaching by mentioning" is unlikely to ensure that students know, much less understand, the key ideas and core processes of the subject. A superficial and disconnected teaching of information simply cannot yield optimal results.

We know of no research that supports the merits of a coverage mode of instruction. On the contrary, a synthesis of 30 years of research on learning and cognition points out the following:

Research on expertise suggests that a superficial coverage of many topics in the domain may be a poor way to help students develop the competencies that will prepare them for future learning and work.

Curricula that emphasize breadth of knowledge may prevent effective organization of knowledge because there is not enough time to learn anything in depth. Instruction that enables students to see models of how experts organize and solve problems may be helpful.

What, then, is the job of a teacher, if not to cover content? Our contention is straightforward: a teacher's job is to cause understanding, as reflected in worthy accomplishments. That requires facilitating the learners' insights and coaching them to transfer their knowledge and skill, as reflected in significant performances involving such transfer. Towards these ends, the content and "professing" serve as means and the textbook serves as a resource, *but not the syllabus!*

Misunderstanding 2: "My Job is to Engage Learners with Interesting Activities"

Teachers who harbour this belief do not feel bound to the textbook. Indeed, many of them disdain the coverage mentality and pride themselves on getting away from the book to make learning more interesting. To this end, they develop (or find) interesting activities and projects for learners. Although we applaud the aim, we have observed numerous cases of well-intentioned teachers who get lost in the activities and lose sight of purpose as well as results.

Consider the following classic case of an activity-oriented unit at the middle school level. The 8th grade teachers at this particular middle school have developed an elaborate interdisciplinary unit, "The Victorian Tea." Here is a description of the unit prepared by the participating teachers:

A study of Victorian England, Charles Dickens, and *A Christmas Carol* takes place annually in our 8th grade. This interdisciplinary unit allows for tremendous infusion and promotion of the visual and performing arts. A few of the objectives include allowing students the opportunity to view and produce works of art in the style of the period; to role-play, write skits, and produce videos; to learn and perform at least one period dance; to appreciate the human experience of the 1800s; and to enhance observation skills, artistic and literary analysis, and oral interpretation. The objective of involving parents in our school is also met.

After exposure to the basics about the period, including fashion and etiquette, students assemble a Victorian outfit and arrive at the annual Victorian Tea prepared to simulate a social gathering of the 1800s.

Students and the invited staff are greeted by parents in servant attire and are escorted into the tea room (school library), which is adorned with period antiques and tables set with fine china and decorations. Students, making light and proper conversation, are careful to remember etiquette instructions. If a serious breach of manners should occur, young ladies must feign convincing swoons. While parents serve the authentic courses, community members perform a humorous skit on Victorian customs while interacting with the students. Background music is typically provided by a parent/student duo. Next students still dressed in Victorian attire use dancing skills that they learned in physical education class to perform a waltz or other period dance. Students then often listen to a community member read Victorian poetry or prose. In the days preceding or following the tea, students perform skits/news broadcasts in social studies and/or science classes, reporting on such topics as child labour, the life of the poor, and water conditions during Victorian times. In English class they learn about Dickens' contributions to the literary world, listen to and participate in candlelight readings of *A Christmas Carol*, and critique artists' book jackets and illustrations of the work. The band director even infused Victorian music into the concert band last year. The teaching duty now really shifts to the students, who, individually or in small groups, investigate in depth a segment of Victorian times. After extensive research and much work with the art and English teachers, they create an oral presentation (The Victorian Project), which could be in the form of an original play, videotape, formal speech, or monologue. Students also conduct demonstrations of artwork/crafts produced or antiques acquired. Some presentations have included a full-course student-made Victorian dinner; designing and producing Victorian jewelry and greeting cards; teaching the art of setting a proper table; reciting Victorian poetry while students play period pieces on flute, piano, and violin; reporting on visits to Victorian Cape May; sketching Dickens' characters and settings; and designing or reproducing models of Victorian homes, furniture, and parks. Students formally critique each other's works through teacher-made sheets. Extra credit can be earned by viewing and critiquing a play or movie about the time period. Students seem to love this unit. Being an active participant promotes high student achievement, which can be proven by the wonderful products made, the actual grades earned, and more importantly by the general enthusiasm. Invariably, we are greeted on the first day of school with, "When do we get to do the TEA!?"

Certainly, this unit has many positive aspects, including its interdisciplinary connections, active student engagement, and parental involvement. The students had access to a variety of resources, including relevant literature, historical artifacts, and guest speakers. They had the opportunity to conduct research from primary and secondary sources and to develop tangible products and performances. Unquestionably, the teachers worked collaboratively,

putting in many hours to orchestrate the various activities. Clearly, the students learned things, including information about the Victorian period, social skills, flower arranging, and how to waltz. They will likely remember the Victorian Tea experience with fondness.

Nonetheless, despite some worthwhile learning and positive feelings, one must step back and question whether the "juice is worth the squeeze." Here are critical questions to consider for this or any "activity-oriented" experience: Are the learning outcomes clearly identified and embodied in the work? Do they reflect important enduring outcomes (big ideas in the disciplines) or simply things that are "nice to know"? Do the students know the intended learning results and spend time processing the activities in terms of those goals? Can the students explain the purpose behind the various activities? Do we have appropriate evidence of learning important ideas and skills? Have students shown that they understand and can transfer what they have learned in meaningful ways? Were the time and energy devoted to the activities commensurate with the resultant learning and a wise use of time given all the other obligations?

If the answer to such questions is no, then one has a professional obligation to question the purpose behind the activities and to eliminate or adjust those that are lacking.

To be clear, we are certainly *not*opposed to trying to engage students. Rather, our critique centers on lack of purposefulness.

Here's another interesting staff exercise that can be used at a faculty meeting or workshop to expose the problem of "activity-oriented" curriculum. First we pose two general questions:

- When are students most engaged and effective, in and out of school?
- What factors make these activities so engaging and effective?

Then we ask half of the group to break into subgroups of three to six people to consider the first category (engaging activities), while the other half divides into subgroups to explore the second category (effective activities). Each subgroup lists activities and situations first, and then generalizes from them, recording their comments on a flip chart. Lists from each subgroup are then shared and synthesized by category. Here are typical responses from each respective group:

Students are most engaged when the activities:

- Are active ("hands-on").
- Involve mysteries or problems.
- Provide variety.
- Allow student choice of product and/or process.
- Offer opportunity to personalize the task/challenge.
- Offer opportunities to work in collaboration with others.
- Are built upon real-world situations or meaningful challenges.
- Use interactive approaches such as case studies, mock trial, group investigation.
- Involve real or simulated audiences.

Activities are most effective when:

- They are focused on clear and worthy goals.
- The students understand the purpose of, and rationale for, the work.
- Clear, public criteria and models allow the students to accurately monitor their progress.
- There is limited fear and maximal incentive to try hard, take risks, and learn from mistakes without unfair penalty.
- Ideas and skills are made concrete and real through activities linking students' experiences to the world beyond the classroom.
- There are many opportunities to self-assess and self-adjust based on feedback.
- The teacher serves as a coach and facilitator to help the learner succeed.

Finally, the two groups share their respective lists, and the entire group is asked to identify the common elements found on both lists. In other words, when are learning activities both highly engaging *and*effective? The mixture is revealing: many of the traits that are at the heart of engagement enhance effectiveness, and vice versa (for example, genuine, hands-on, real-world problems; opportunities to "do" early and often; getting feedback along the way). The resulting synthesis list becomes a set of criteria by which teachers can evaluate existing activities (such as the Victorian Tea). Because the list has been locally constructed, derived from people's own learning and teaching experiences, teachers are more likely to see it as credible. Such a list then serves as a common touchstone by which they can examine and, when necessary, improve all learning activities.

Once again, this second misunderstanding should be obvious. Despite teachers' good intentions and hard work, activities must always be seen as a means to important learning ends, not ends in themselves. In sum, a teacher's job is to engage students in purposeful activities that are both engaging *and* effective.

Misunderstanding 3: "My Job Is to Teach to the Test"

State and provincial content standards and concomitant testing programmes have emerged during the past decade with the intention of focusing local curriculum and instruction and boosting student achievement by holding schools accountable for results. Ironically, the key lever in this standards-based reform strategy—the use of high-stakes accountability tests—has unwittingly led to a misconception on the part of some teachers—namely, that their job is to teach to the test. This view is understandable given the unrelenting pressures to "get the scores up" and meet the Annual Yearly Progress (AYP) requirements.

Although seeking improved performance on standardized achievement measures is not inherently wrong, the misunderstanding lies with *how* to best achieve that aim. We have observed many teachers (often at the behest of administrators) who have redirected their instruction towards the format of their state or provincial test. In the worst cases, the curriculum has morphed into a test-prep regimen of practicing testlike items and learning test-taking strategies.

Although it is certainly true that teachers are obligated to teach to established standards, it does not follow that the best way to meet those standards is to mimic the format of the state or provincial test and to cover prescribed content via superficial, multiple-choice teaching. Must we sacrifice more effective and engaging forms of instruction to raise test scores? Is more passive and fragmented teaching more or less likely to maximize student interest and performance? Do we have to teach *worse* to get higher test scores? We think that the problem reflects an underlying misunderstanding about how testing works, how validity is established, and how learning is maximized.

To expose the flaw in this reasoning, consider an analogy. Once a year, we go to the doctor for a physical exam. No one particularly relishes the thought of such an exam, but we go with the understanding that it is in our long-term interest to get an objective (yet superficial) measure of our health. The doctor performs a few tests in a short span of time (blood pressure, pulse, temperature, blood work to measure cholesterol). The "physical" is a small sample of tests, yielding a few useful indicators of one's health status. Its validity and value stem from the fact that the results *suggest* our state of health, not because the physical *defines* healthfulness. We take a relatively quick and non-intrusive physical exam so that various "indicators" can be examined for signs of any deeper trouble demanding further scrutiny.

Now suppose we are terribly concerned about the final numbers (weight, blood pressure, and other measures) and that these results ultimately link to the costs of our health insurance. What we might do, in our panicky state before each annual physical, is "practice" for the test—focus all our energy on the physical exam (as opposed to what its indicators suggest). If our doctor knew of our actions, the response would surely be, "Whoa! You're confused. You have mixed up causality and correlation here. The best way to 'pass' your physical is to live a healthful life—exercise, watch your weight, lower your intake of fats, eat more fibre, and get sufficient sleep."

Note that *none* of the elements of true healthfulness—diet, fitness regimen, or stress management—is *directly* tested in the physical. Doctors use *indirect* indicators, such as blood pressure, weight, skin tone and colour, and cholesterol levels, to gauge our health status. The indicators are correlational, not causal. In other words, the effects of our healthful regimen will be reflected in the test indicators. In fact, the more we concentrate only on what is on the physical exam, the less likely it is in the long run that we will be healthy.

Like the doctor, state education agencies give schools an annual checkup via such indirect testing of student performance. A state test, like the physical exam, consists of indicators of local "health"—a set of "items" that sample indirectly from the broader domain of the content supposedly addressed through a local educational regimen. The test yields valid inferences to the extent that test results correlate with more complex and meaningful learnings—in the same way that the physical exam relies on tried-and-true indicators like blood pressure and cholesterol level. Simple items are used to test indirectly for a "healthy regimen"

in the same way that the physical is a proxy for the daily "tests" of genuine fitness and wellness. That is the nature of test validity: establishing a link between one set of easy-to-obtain indicators and a related set of more complex and desired results. (Although it may surprise many readers to hear us argue this way, given our long-standing, documented opposition to overreliance on indirect tests, the issue here is more narrowly focused on test validity. Numerous arguments can be made on behalf of more performance assessment in educational testing, but the issue here is the reverse: indirect—"inauthentic"—tests can yield valid inferences, just as "authentic" tasks can yield invalid inferences.)

People would think it silly to practice a physical exam as a way to be healthy. But this confusion is precisely what we see in schools all over North America. Local educators, fearful of the consequences of poor results or failure to show gains, focus on the indicators, not their causes. The format of the test misleads us, in other words.

Please understand that this explanation does not constitute an endorsement of current standardized-testing practices that rely too heavily on one-shot external testing. In fact, we feel strongly that state agencies and policymakers bear a responsibility for allowing this confusion to persist by not making local assessments a part of a comprehensive state accountability system. What matters most in educational reform is that we take to heart the point of the analogy: we—not the state—are responsible for wellness. The state's job is to audit. Just as the physical exam is not the regimen we should engage in at home, but rather is a set of superficial indicators to see if our regimen is adequate, the state test does not try to duplicate all the "healthful" activities and assessments that should be taking place day in and day out at the local level in classrooms, schools, and districts. Indeed, the state could not possibly assess everything of value in an authentic way, even if we all wanted that to occur, because of excessive costs and the desire to limit the intrusions of external testing. This is true for doctors, too: to require all patients to come in for several days of comprehensive tests at a medical lab would be excessively time-consuming and costly (never mind expecting our insurers to foot the bill).

"Are you then saying that a more concerted effort to 'teach to the test' *lowers* scores?" No. Teaching to the test clearly has *some* effect, particularly if before such practice there was little attention to common standards and a focus on results. Scores do increase in the short run when a school or district focuses more carefully on a common goal. No surprise here: greater attention to an outcome will improve performance on *any* measure. But once the test particulars are figured out and students have become familiar with the test format and test-taking skills, long-term progress rarely occurs, and the scores typically drop when the test is altered or renormed.

It appears to us that educators are confused by the lack of "face validity" of the tests into assuming that teachers must mimic the test format. Worse, they wrongly infer that their own instruction should focus on a superficial survey of content and decontextualized treatment of facts and skills, as suggested by the test's construction.

A related misunderstanding lies in the view that external test scores determine educational success. Without debating the merits and demerits of particular tests, we are saying what should be more obvious than it is: the test score is not the end; good test scores do not signal "mission accomplished." Test scores are indicators in relation to *some* of our goals. Few state standards and tests even attempt to address all worthy educational goals, such as those related to character, study skills, the arts, employability, and lifelong learning. It is perhaps leadership's greatest challenge in the new world of standards and accountability to help staff understand that their job is to focus on *mission-critical results* and not fixate on the once-a-year audit of indicators.

In sum, we are not saying "do not concern yourself with tests." Rather, we propose that the best way to raise test scores over the long haul is to (1) teach the key ideas and processes contained in content standards (the content that is purportedly tested) in rich and engaging ways, (2) collect evidence of student understanding and transferability of that content via robust local assessments, and (3) raise the standards and quality control for local assignments and assessments to gather evidence of all that we value, not just what is easiest to measure.

DESIGNING BACKWARD TO DETERMINE THE TEACHER'S ROLE

So what is the job of a teacher when teaching? As Mursell (1954) succinctly put it more than 50 years ago:

Successful teaching is teaching that brings about effective learning. The decisive question is not what methods or procedures are employed, and whether they are old-fashioned or modern, time-tested or experimental, conventional or progressive.... The ultimate criterion for success in teaching is—results!

Thus, a teacher's job description needs to be derived by working backward from the stated mission and goals. As a teacher, we must ask, in a backward-design way, what kinds of learning accomplishments are sought? What should be our role as a teacher in that learning situation, given the desired results? If the mission calls for developing student understanding leading to genuine transfer performances, not simply knowledge acquisition, then our job as teachers is dictated by those aims.

Ideas for Action

- Ask teachers to write a summary of their job description as they perceive it. Collect, review, and discuss these at a team or faculty meeting. What patterns are evident? What staff misunderstandings are revealed? What important job functions are missing?
- Review an existing job description for teachers. Does it include specific job responsibilities and performance indicators? Does it explicitly call for the kinds of functions described in the second part of this chapter? What changes or clarifications are needed?
- Review the current teacher evaluation process. To what extent is the current appraisal system in sync with expected job functions? What does the current process signal to staff about what really matters? What changes or clarifications are needed?

PHILOSOPHICAL PERSPECTIVES ON TEACHER EDUCATION

Philosophical perspectives play a pivotal role in shaping teacher education, providing the theoretical framework and guiding principles that underpin pedagogical practices. These perspectives encompass a wide range of philosophical traditions, including constructivism, critical pedagogy, pragmatism, and existentialism, each offering unique insights into the nature of teaching and learning. Constructivist approaches emphasize the active construction of knowledge by learners, encouraging educators to create environments that foster inquiry, exploration, and discovery. Critical pedagogy, rooted in social justice and equity, advocates for transformative education that challenges oppressive structures and empowers students to become agents of change in their communities. Pragmatism emphasizes the practical application of knowledge and the importance of experiential learning in teacher development. Educators are encouraged to engage in reflective practice and adapt their teaching strategies to meet the diverse needs of learners. Existentialism and humanistic perspectives focus on the holistic development of individuals, recognizing the unique identity and potential of each student. Teachers are seen as facilitators of growth, fostering meaningful connections with students and creating supportive learning environments that promote self-discovery and personal fulfillment. Incorporating philosophical perspectives into teacher education programs encourages educators to critically examine their beliefs, values, and assumptions about teaching and learning. By grounding their practice in philosophical inquiry, teachers are better equipped to navigate the complexities of the classroom and respond effectively to the diverse needs of their students. Exploring the philosophical underpinnings shaping teacher education in a dynamic educational landscape.

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