



T E A

Innovations and Initiatives in

EDUCATION

H

E

R

in Asia and the Pacific Region

Volume 1: Overview



UNESCO PRINCIPAL REGIONAL OFFICE FOR ASIA AND THE PACIFIC
Bangkok, 1990

Unesco. Principal Regional Office for Asia and the Pacific.
Innovations and initiatives in teacher education in Asia and the Pacific region. Bangkok, 1990.

2 vols. (Asia and the Pacific Programme of Educational Innovation for Development)

Contents : -v.1 Comparative overview of fifteen countries.
-v.2 Case studies of fifteen national systems.

1. EDUCATIONAL INNOVATIONS - ASIA/PACIFIC.
2. TEACHER EDUCATION - ASIA/PACIFIC.

371.39

370.71



ASIA AND THE PACIFIC PROGRAMME
OF EDUCATIONAL INNOVATION FOR DEVELOPMENT

INNOVATIONS AND INITIATIVES
IN TEACHER EDUCATION
IN ASIA AND THE PACIFIC REGION

Volume 1:
Comparative Overview of Fifteen Countries



Unesco Principal Regional Office for Asia and the Pacific
Bangkok, 1990

© UNESCO 1990

Published by the
Unesco Principal Regional Office for Asia and the Pacific
P.O. Box 967, Prakanong Post Office
Bangkok 10110, Thailand

Printed in Thailand

Any opinions expressed or implied in this publication are not necessarily those of Unesco or APEID. The designations employed and the presentation of the material do not imply the expression of any opinion whatsoever on the part of Unesco concerning the legal status of any country territory city or area or of its authorities or consenting its frontiers or boundaries.

CONTENTS

Volume 1—Comparative Overview of Fifteen Countries

	<i>Preface</i>	<i>i</i>
Chapter 1	Emerging Trends and Developments	1
Chapter 2	Review of Case Studies of National Systems	23
Chapter 3	Summary of Innovative Developments in Teacher Education .	55
Annex 1	Teacher Education: A Statistical Profile	71
Annex 2	Survey of Teacher Education	87
	<i>Bibliography</i>	97

LIST OF TABLES AND FIGURES

Figures

1. Illiteracy of Population Aged 15 Years and Over by Major Region, 1970-2000 77

Tables

1. Total Population, 1970-2000 76
2. Percentage Illiterate Aged 15 Years and Over: Estimates and Projections by Regions and Subregions, 1970-2000 76
3. Literacy in Countries of Asia and the Pacific, 1970 and 1980 78
4. Percentage Distribution of the Population of 25 Years and Over According to Education Attainment 79
5. Gross Enrolment Ratios for Girls at the First and Second Levels of Education, 1970 and 1982 80
6. Total Public Expenditure on Education as a Percentage of Gross National Product (GNP), 1970, 1975, 1981 81
7. Total Public Expenditure on Education as a Percentage of Total Government Expenditure, 1970, 1975 and 1981 82
8. Enrolment at the Third Level of Education by Field of Study in Asia and the Pacific, 1970 and 1980 82
9. Selected Indicators on Teaching Staff by Level of Education in Asia and the Pacific, 1970-1982 83
10. Education at the First Level: Teaching Staff and Pupils and Pupil/Teacher Ratios 84
11. Education at the Second Level: Teaching Staff and Pupils 85
12. Education at the Third Level: Students by Field of Study by Sex 86

PREFACE

The purpose of this two-volume report, entitled *Innovations and Initiatives in Teacher Education in Asia and the Pacific: A Comparative Study*, is to indicate the main changes that have occurred in teacher education in Asia and the Pacific region over the past fifteen or so years, and to facilitate the flow of information between countries.

The purpose of encouraging such a flow of information is to help those engaged in educational reforms within the area of teacher education to become better acquainted with the innovative practices being carried out in their own countries, and to share experiences with those engaged in similar activities in other countries in the region.

The report is published in two volumes: *Volume 1—Comparative Overview of Fifteen Countries* reviews and summarizes the main issues, innovations and initiatives in teacher education emerging in the region, and relates these to emerging trends and developments in education in Asia and the Pacific; *Volume 2—Case Studies of Fifteen National Systems* provides more detailed case studies of innovations in teacher education in countries in the Asia and Pacific region.

One of the main aims of Unesco's Asia and Pacific Programme of Educational Innovation for Development (APEID) has been to build up an information base on innovative experiences available in the region that are contributed by the people who are, themselves, responsible for the work. APEID now has 28 Member Countries and 188 associated centres in the region.¹

Although concerned with many important aspects of education in Member Countries—such as the universalization of primary education, education for the world of work, and the education of people in remote areas—APEID has always been especially concerned with the development of teacher education.

This concern with the development of teacher education is not surprising since, during at least the last two decades, teacher education and the training of educational personnel have been the most frequently discussed topics by educators at all levels of education in the region. Over this time, governments in the region have been seriously engaged in reorganizing their educational endeavours and redefining their educational goals.

These redefined educational goals, along with changes in the concepts and practices of education, and the demands of development, have brought about several significant changes in the roles and functions of teachers. The response to the changing characteristics of education, and the more demanding role of the teacher, has required education systems in general, and teacher education in particular, to be creative in character. It has required innovations and initiatives to ensure that teachers are adequately trained and educated to cope

¹. As of February 1990, APEID's Member States are: Afghanistan, Australia, Bangladesh, Bhutan, China, Democratic People's Republic of Korea, Fiji, India, Indonesia, Iran, Japan, Lao People's Democratic Republic, Malaysia, Mongolia, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Socialist Republic of Viet Nam, Sri Lanka Thailand, Tonga, Turkey and the Union of Soviet Socialist Republics.

with their changing and increasingly demanding roles in society; and it has also required policy makers to think of teacher education in terms of career-long learning and training.

It has been recognized for some time now that teacher education systems must be structured and organized in a way that enables them to respond dynamically to the emergence of new educational problems and challenges, if they are to help education fulfil its role in national development.

It is not the intention of this report to be exhaustive or all embracing in approach. Instead, it seeks to convey the essential flavour of what is occurring in the region with regard to innovations and initiatives in teacher education in order to facilitate the exchange of information between Member Countries, with regard to what is both common and uncommon ground among them when it comes to innovations and initiatives in teacher education.

Background to this Report on Teacher Education

This two-volume publication identifies new initiatives and innovations in teacher education now emerging in Member States in Asia and the Pacific region, enabling a comparison to be made between the current situation and that which was described in the 1972 report published by the Unesco Regional Office for Education in Asia, in association with the Asian Institute for Teacher Educators, University of the Philippines, entitled *Teacher Education in Asia: A Regional Survey*.

The 1972 report sought to describe the status of teacher education for schools at the primary and secondary levels of education in the Member States in Asia around 1970. The survey was limited to the training of primary and general secondary school teachers, and did not include the training of teacher educators, teachers for vocational, technical and other diversified streams in secondary education, or teachers at agricultural, trade, industrial and engineering schools of the secondary level.

The 1970 survey was initiated to assemble data in preparation for the Third Regional Conference of Ministers of Education and Those Responsible for Economic Planning in Asia, which was convened by Unesco in Singapore from 31 May to 7 June 1971. The survey therefore covered only those countries which were Member States at the time it was initiated, and which participated in the Conference, namely (using the names of the countries as they were at the time of the Conference): Afghanistan, Burma, Ceylon, the Republic of China, India, Indonesia, Iran, Cambodia, the Republic of Korea, Japan, Laos, Malaysia, Mongolia, Nepal, Pakistan, the Philippines, Singapore, Thailand and the Republic of Vietnam.

Although since then other surveys have been undertaken concerning various aspects of teacher education, no comprehensive survey of teacher education in the region has been published since the 1972 report by Unesco. Unesco therefore considered it timely to publish a new report to illuminate the main changes that have occurred in teacher education in the Asia and Pacific region over the last 18 or so years.

Some changes in the organization of Unesco's contribution warrant explanation. The Unesco Principal Regional Office for Asia and the Pacific (Bangkok), as its name implies, is now concerned with both Asia and the Pacific. A major development was the establishment of the Asia and the Pacific Programme of Education Innovation for Development (APEID) as a programme under Unesco PROAP in 1974. APEID functions as a regional mechanism for co-operation in education. In view of these changes, this report refers to countries in both the Pacific and the Asia region; and its emphasis is on innovations and initiatives in teacher education which have occurred or are occurring in the Member Countries examined.

Methodology

A regional meeting on teacher education was organized by APEID, Unesco Principal Regional Office for Asia and the Pacific (PROAP), Bangkok, in collaboration with the Centre for Education, University of Tasmania, Hobart, Australia, from 4 to 10 December 1986. The meeting was attended by personnel responsible for and involved in the development of teacher education in sixteen countries, namely: Australia, China, India, Indonesia, Japan, Republic of Korea, Malaysia, Republic of Maldives, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Western Samoa, Sri Lanka and Thailand.

During 1985 and 1986, eighteen countries in the Asia and Pacific region undertook a survey of their teacher education programmes. These survey studies provided statistical data and information, as well as details of trends and developments in teacher education. At the regional meeting in Hobart, participants from the sixteen countries presented short, redeveloped papers in which they reported on innovations and issues in teacher education currently occurring in their particular countries. Because of the comprehensive nature and richness of the data collected, APEID decided to produce a major report.

The procedure adopted for the writing of this two-volume report was as follows. Dr. Rupert Maclean, Head, Department of Educational Studies, University of Tasmania, was contracted by APEID as a consultant to help prepare a design for writing a comparative study on teacher education in APEID Member Countries in Asia and the Pacific Region, and to compile the ensuing report. The content of this study was to be based on the survey materials (and redeveloped country reports) of innovations and initiatives in teacher education prepared prior to and after the regional meeting on teacher education held in Hobart in December 1986. This would be augmented by data collected as a result of a library search to locate other relevant information on this topic, plus recent APEID publications and papers on various aspects of innovations and reform in teacher education.

The design for undertaking this comparative study was presented by the consultant to an APEID planning group meeting of participants from Member Countries held at Unesco, Bangkok, in November 1987; in the light of comments made at that meeting, adjustments were made to the proposed structure and content of the study. A draft report written by the consultant was then reviewed by participants from Member States who attended the APEID Regional Study Group Meeting on Reform in Teacher Education held in the Republic of Korea in October 1988. This comparative study of teacher education was subsequently prepared by the consultant in light of their comments.

Organization of this Report

Volume 1—Comparative Overview of Fifteen Countries

Following the Preface, which introduces the subject matter and explains the background to the study, Chapter 1 identifies and discusses emerging trends and developments regarding educational issues, schooling practices and teacher education in the region. Chapter 1 describes the broad educational context within which innovations and reforms in teacher education need to be assessed. Only by identifying such practices and reforms can the appropriateness and effectiveness of new directions in teacher education be properly evaluated.

Chapter 2 identifies key issues, innovations and initiatives in teacher education emerging in the region and presents short summaries on a country-by-country basis of the detailed case studies that appear in the second volume of the report.

Chapter 3 focuses on innovative developments in teacher education. Innovations and initiatives in teacher education examined in detail on a country-by-country basis in the second volume of the report are summarized in Chapter 3 of this volume under the following ten headings: pre-service teacher education, teacher education, in-service teacher education, specialized teacher training, teacher recruitment and admission, structural changes for teacher education, system links and cohesion and ways of organizing teacher education, policy changes for teacher education, training for teacher educators, and research on teacher training. Chapter 3 also examines the implications of the content of this comparative study of teacher education for policy making and educational practice.

A detailed bibliography of research and related literature published since 1980 on innovations and reforms in teacher education in the Asia and Pacific region is located at the end of volume one; this is followed by two annexes: Annex 1 provides a statistical profile of key aspects of education and teacher education in the region, and Annex 2 reproduces the survey questionnaire used.

Volume 2 - Case Studies of Fifteen National Systems

This volume commences with a Preface similar to that in Volume 1, which provides an introduction to the subject matter, defines the key terms and nomenclature used, and then explains the background of the studies. A bibliography identical to that in volume one is located at the end of volume two. The remainder of volume two contains detailed case studies of innovations and initiatives in teacher education in fifteen Asia and Pacific countries. The following countries are examined: Australia, People's Republic of China, India, Japan, the Republic of Korea, Malaysia, Republic of the Maldives, Nepal, New Zealand, Pakistan, Philippines, Sri Lanka, Thailand, Viet Nam, and Western Samoa.

The case studies presented vary somewhat both in content and length, because they are largely based on the survey material presented by each of the countries concerned. Although the structure of particular case studies may differ, an attempt has been made to achieve some comparability between the studies of national systems by, where possible, organizing the material so that it covers the following key aspects of the topic: historical background of teacher education, recent developments and current provisions in teacher education, innovations and initiatives in teacher education, and future directions. Any gaps that do exist in these case studies occur because the information sought was not available at the time of writing.

A survey of this type will obviously require periodic revision if it is to take account of the rapid and extensive developments and change occurring in teacher education in Asia and the Pacific countries. In view of this, it is hoped that Member Countries of APEID will provide additional information to help fill in the gaps in data that currently exist. This information can then be included in future editions of this report.

Acknowledgements

This survey has only been possible due to the generous co-operation received from Ministries of Education and the National Commissions for Unesco in Member Countries. Their vitally important contribution to the successful assembling and collection of information on current innovations, reforms and initiatives in teacher education is gratefully acknowledged. The publication was co-ordinated by Dr. H.K. Paik, Chief of the Asian Centre of Educational Innovation for Development (ACEID) up to 30 June 1988 and by Dr. Leonardo de la Cruz Head of ACEID from 1 July 1988. Unesco wants to express its gratitude towards Dr. Rupert Maclean for his invaluable efforts in preparing and compiling these volumes.

Chapter 1

EMERGING TRENDS AND DEVELOPMENTS

This chapter provides an overview of the trends, reforms and developments currently occurring and emerging in Member Countries with particular regard to the programme areas of APEID's fourth cycle (1987-1991). Innovations and initiatives in teacher education referred to elsewhere in this report will thus be examined in terms of the extent to which they are being responsive to the types of developments and the changed emphasis currently occurring in the schooling systems of Member Countries, locating these within the overall context of the systems of teacher education in Asia and the Pacific countries. Any mismatch between changes in school systems and the response of teacher education establishments to these changes can then be identified.

There is sometimes a wide variation between Member Countries with regard to what they believe constitutes an innovation, reform or development; this should be kept in mind when interpreting the information presented. For example, the use of coloured chalk and basic audio-visual materials may be regarded as being an educational innovation in some developing countries in the region, while in other more affluent countries innovations may largely refer to the development and use of sophisticated computer facilities. When reference is made in this report to educational innovations, developments and initiatives, it is mainly on the basis of how these are defined in the country or countries in question.

This chapter presents ideas culled from articles and monographs written for APEID and Unesco-sponsored symposia and meetings and Unesco-commissioned studies, as well as information obtained from a short questionnaire sent to Member Countries in May 1988 which sought recent information on what is occurring in each country with regard to trends in the reform and development of their school systems.

Definition of Key Terms and Nomenclature Used

To ensure that a certain consensus exists regarding the terminology in this report, and that the use of terms is consistent with that adopted in other APEID publications, certain key terms will be defined and explained. The terms *educational change*, *educational innovation*, *educational reform* and *educational development* are of central importance to this examination of teacher education in Asia and the Pacific.

Educational change refers to any noticeable move from established practice; it may be may be large or small, lengthy or brief.

1. (i) Universalization of primary education, (ii) Continuing education, (iii) Education for the world of work, (iv) Restructuring secondary education, (v) Educational and communication technology, (vi) Professional training, including professional support services and distance education, and (vii) Science and technology education.

Educational innovation refers to an idea or practice new to a specific educational context that meets unsatisfied needs. It is the introduction or promotion of new ideas and methods that are devised in education and/or school practices which have a substantial effect on changing the existing patterns of behaviour of the group or groups involved. Innovative strategies imply the development of new ideas which are disseminated and utilized; they usually occur in response to particular problems that exist in the education systems of Member States.

The interpretation given to 'innovation' at the 1986 Ministerial Conference in Singapore was 'innovation for development,' in which the process of development was seen as a means of bringing about certain fundamental and pervasive transformations in motivations, attitudes, habits and modes of thought and work—in other words, if education is not to be relegated to the role of bystander in the development process, it should become an active participant in the necessary social changes. Although there is some disagreement among writers on the subject, specific characteristics of an innovation can include the following.

- It introduces a new or novel element which deviates from existing structures and/or procedures and is orientated towards the values of the society.
- Its specific objective and/or purpose is relevant to the needs of the community and related to national development.
- It has potential for diffusion on a large scale and is renewable from time to time based on appropriate feedback and the context for adoption and adaptation.
- The innovative process should involve a scientific approach before being either accepted or discarded.
- During the experimental stage, an innovation should permit flexibility on the basis of monitoring and evaluation.
- It should be both cost and time effective, and communicable to and able to be implemented in other parallel situations. Reliability, with or without adaptation, should be a criterion for innovativeness.

Educational reform refers to a planned change brought into widespread use for the betterment of an educational system. It is an innovation that is in widespread use throughout a particular education system.

Educational development refers to educational reforms, innovations or changes that result in the advancement or improvement of education systems. It is an overall, multidimensional and diversified process, essentially endogenous in nature, linked with the values peculiar to each society and requiring the active participation of individuals and groups who are its agents and beneficiaries.

Both *educational reform* and *educational development* are types of change. Other important definitions and classifications, adopted and used by Unesco and presented in the International Classification of Education (ICED), are as follows.

Teacher education refers to both pre-service and in-service programmes which adopt both formal and/or non-formal approaches. It is a continuing process which focuses on teacher career development.

A *pupil* (or *student*) is a person enrolled in a school for systematic instruction at any level of education.

A *teacher* is a person directly engaged in instructing a group of pupils (or students). Heads of educational institutions, supervisory and other personnel are only counted as teachers when they have regular teaching functions.

A *school (or educational institution)* is a group of pupils or students of one or more grades organized to receive instruction of a given type and level under one teacher, or under more than one teacher and an immediate head.

A *public school* is a school operated by a public authority (national or federal, state or provincial, or local), whatever the origin of its financial resources.

A *private school* is a school not operated by a public authority, whether or not it receives financial support from such authorities.

Education preceding the first level refers to education provided for children who are not old enough to enter a school at the first level: for example, nursery school, infant school and kindergarten.

Education at the first level has the main function of providing the basic elements of education: for example, elementary school or primary school.

Education at the second level is based upon at least four years of previous instruction at the first level, and provides general or specialized instruction, or both: for example, middle school, secondary school, high school, teacher-training school at this level, or schools of a vocational or technical nature.

Education at the third level requires, as a minimum condition of admission, the successful completion of education at the second level or evidence of the attainment of an equivalent level of knowledge: for example, university, teachers college or higher professional school.

At various points in this report reference is made to *developed* and *developing countries*. These terms will be used in a way that is consistent with the latest (1988) available Unesco Statistical Yearbook which identifies the developed countries in Asia and the Pacific region as Japan, Australia and New Zealand; all other countries in the region are classified as *developing countries*.

Emerging Educational Reforms and Developments in Education²

Universalization of primary education. The universalization of primary education implies that all school-age children are enrolled in school, remain for a full cycle of primary education, and are exposed to a quality education. It is a major way to combat illiteracy.

It is clear from the survey undertaken that, although some countries in the region have yet to attain the goal of universal enrolment, all are striving to provide a free primary education for all, particularly girls and those who belong to deprived sections of society, such as tribal populations and those who live in isolated areas. Countries seek to achieve this through the following types of measures:

- creation of minimum essential physical facilities (adequate school buildings, toilets, drinking water, etc.);

2. Based on the working paper for the eleventh regional consultation on APEID, prepared by Dr. Rupert Maclean on the basis of a region-wide survey conducted by Unesco ACEID in 1988.

- provision of minimum essential educational facilities (blackboards, playgrounds and games materials);
- establishment of resource centres which serve the needs of a cluster of schools in their vicinity;
- provision of school incentives (free textbooks, uniforms, midday meals and hostel accommodations);
- increasing the use of informal and non-formal approaches to teaching and learning on a part-time basis, and utilizing locally available facilities and resources; and
- use of 'walking teachers' who visit schools in distant places and difficult terrains, and use of 'tent schools' for nomadic tribes.

To retain those who have enrolled on either a formal or non-formal basis in primary education, and thereby reduce the drop-out rate and help impart a good quality education, several common issues, such as the following, can be identified:

- devising more effective ways to help children achieve adequate levels of learning at the mastery level in such cognitive areas as language, mathematics, science and manipulative skills, and develop certain key socio-emotional traits, such as appropriate interests, appreciations, attitudes and values;
- development of a needs-based, relevance-based curriculum which accommodates such diverse groups of children as the disadvantaged, slow learners and high achievers. In the case of disadvantaged and underserved groups in society, provision of early intervention programmes is considered important;
- decentralization of the process of curriculum and instructional material development involving efforts of teachers, teacher educators, supervisors and extension workers engaged in developmental activities;
- modification of pre-service and in-service teacher education programmes to better equip primary teachers to cope with emerging trends in the development of curriculum, print and non-print instructional materials;
- increasing the use of school-based testing and internal assessment techniques for measuring both the cognitive and non-cognitive traits of learners;
- desirability of developing a nationally-based core curriculum without losing the benefits of decentralizing decision making as regards content of the primary school curriculum, which enables schools to be responsive to their communities;
- a concern with achieving quality as well as equity in primary schooling, which recognizes the importance of both providing education of a high standard and expanding the number of places available; and
- a reexamination of the fundamental relationship between and the functions of the home, the school and the community as partners in the schooling enterprise, and the development of strategies to ensure that the potentially positive educational influence of the home is tapped.

Continuing education. The survey of Member Countries in Asia and the Pacific reveals that continuing education is widely accepted as playing an important role both in individual professional advancement (through lifelong development of vocational capabilities) and in the overall development of the individual. Continuing education can take many diverse forms, such as an up-grading in the knowledge and skills of such professionals as medical practitioners and teachers, functional literacy classes for children and adults, and livelihood skills development programmes for out-of-school youth and underemployed or unemployed adults. It involves the development and use of self-learning materials as well as more formal delivery systems.

An important problem which the expansion of continuing education can help reduce is the tendency for some learners to lapse back into illiteracy once they have left school. Thus, through the provision of post-literacy programmes, continuing education has a vital part to play in the region. Important trends in this area of activity include the following:

- establishment of village reading and learning centres and libraries;
- development of 'follow-through' and bridging courses which consolidate the knowledge and skills acquired during schooling—this being achieved through the use of volunteers and interest groups to facilitate continuing education programmes;
- use of distance learning, with help from print and non-print mass media;
- development of vocation-oriented programmes which prepare students for entry to the work force; and
- an acceptance that continuing education has an important part to play in the education system, especially in the non-formal sector.

Continuing education is important with regard to teachers and teacher education, as it enables teachers to keep abreast of the latest developments in their subject and skill areas.

The survey shows that in many countries in the region continuing education is one of the most rapidly expanding sectors of the education system, which is being required to serve the needs of an increasingly diverse group of out-of-school youth, drop-outs and adult learners. As a result, there is a need for greater flexibility in course offerings and timetable facilities.

Education for the world of work. It is apparent that there is an increasing emphasis in Member Countries on relating education to the world of work, this being viewed in a much broader sense than merely preparing individuals for entry to a particular occupation. This reflects the belief that, although education systems need to prepare pupils in practical as well as moral and psychological terms to better enable them to choose socially useful and productive work in industry, science, culture and education, the systems should also cater to the needs of those who are unable to find employment and, at the same time, recognize that an individual's self-image and sense of social identification are often closely associated with personal participation in the work force. There is also the realization that a country's economic development will only occur (and be sustained) if a sufficient supply of trained manpower exists; consequently, schools need to be responsive to the changing requirements of economic systems.

The increasing emphasis on education for the world of work has been stimulated by such important factors as: the need to ensure the relevance of education to the socioeconomic development priorities of Member Countries; the accommodation of increasing technological developments in society in relation to labour-force requirements; a wish to reflect the changing expectations of employers in education; helping school leavers obtain access to

employment; developing in pupils a basic literacy with regard to science and technology; and a wish to contribute to the modernizing of education systems so that the changing needs and aspirations of both individuals and the society as a whole are met. These trends, which relate to the interface between education and the world of work, entail three particularly important aspects:

- practical activities relating to the world of work which are considered an integral part of the learning process—this enables a suitable balance to be struck between theory and practice; it is aimed at the all-round development of the individual (trends in this area are manifested in such various educational practices as: participation in community development activities; productive work projects, both inside and outside the home, that are specially designed for females; 'life skills' projects; and programme involvement in such areas as health, nutrition, sanitation, population and environmental conservation);
- participation in work activities which help strengthen and develop desirable social attitudes, including the value of the work ethic—respect for manual labour, a sense of social identification and participation in national development are some of the benefits referred to by Member States; thus, educational programmes increasingly embody work-experience projects, whether on farms, in industrial enterprises or as may involve social development activities; and
- provision of a transition from school to work by preparing pupils for 'working life'—this being considered on a wider basis than only that of preparation for an occupation. Trends in this respect include linking education programmes more closely to work skills and developing appropriate work competencies, habits and styles. The integration of vocational experiences with general education has also been sought in many countries and has resulted in: courses in basic practical skills development; self-employment programmes and entrepreneur training; the mobilization of development agencies, with the private sector participating in the education effort; promotion of technological literacy; and moves to achieve closer links between education and other production systems in the countries concerned.

These changes are helping to broaden the foundation of general education, on the one hand, and integrate formal and non-formal education on the other. Recognition is made of the importance of both primary and secondary level education. Changing programme structures, for instance, may provide for two years of vocational training after general education, or for 'streaming' after a general education for career and work contingencies has been provided for. Trends are also evident with regard to the techniques and criteria used for selection into work-oriented programmes by those involved with vocational aptitude training, and breaking the link between entry to work with other more academic entry requirements.

In some countries, curriculum developments for these programmes have resulted in: the definition of minimum skills and values regarded as relevant for the world of work; the involvement of industry in jointly formulating what is seen as being an appropriate curricula; and providing off-campus industry-based training. Because of a shortage of resources, countries are also integrating available facilities to facilitate a broader coverage of the programmes. As a result of such changes, programmes have been developed across the curriculum to enhance vocational preparation and choice. Foundation courses incorporated within secondary education have introduced students to industrial or vocational skills, and there has been development and expansion of polytechnics and increasing stress on vocational guidance facilities.

Restructuring secondary education. The socioeconomic and political changes currently taking place in many countries in Asia and the Pacific require that these countries undertake a restructuring of secondary education. There are, however, variations from country to country in the manner in which the restructuring processes are carried out—the direction of efforts being dependent on the particular needs and priorities these countries have identified. One common belief is that, as with primary education, the goal should be to provide universal and free secondary education for all.

While some countries with predominantly agricultural economies are beginning to shift towards industrialization, others are preoccupied with restrengthening agriculture as the best way to produce an economic base adequate to achieve national stability, growth and peace.

While the demands of producing skilled manpower to match the societal needs at the production, technical and professional levels are great, it is also important for secondary education (as is the case with primary education) to produce young citizens who are highly motivated (with 'appropriate' values and attitudes) and want to pursue learning as a lifelong process. In most countries the restructuring of secondary education seeks to ensure that the maximum potential of every individual in the school system is addressed.

In helping to achieve such objectives, secondary education is confronted with several major concerns, which include:

- the need to balance the drive that is occurring in some Member States to develop a national core curriculum, the central goal of which is to develop a curriculum that covers what are regarded as being fundamentally important skills and knowledge, with the simultaneous desire to democratize decision making of the important aspects of curriculum content at the local level;
- a wish to improve the retention rate from primary to secondary school and reduce the high rate of school drop-outs that is occurring in both developing and more developed countries (one possible solution identified is the emergence of more flexible entry and re-entry mechanisms in many countries— such as easier school access and the provision of a second chance for school drop-outs and adults; another possible solution is 'vocalization' of secondary education, however, this raises important questions as to which type of vocational education is the best to provide and how it can respond effectively to satisfy both manpower planning needs and the needs of the individual, whether employed or not); and
- the need to develop the non-formal aspect of secondary education through the provision of a less structured, more child-centred type of curriculum— this being delivered to clients through such means as distance education, correspondence courses and open education.

Other developments in Member Countries include: attempts to increase retention rates in secondary education, particularly at the senior secondary level; the achievement of quality as well as equity in secondary education; catering to the special needs of ethnic and racial minority groups, those from lower socioeconomic status 'backgrounds,' and girls and women; the mainstreaming of special education students; attempts to make the curriculum more practical so that students are better equipped to deal with real-life situations (through such things as emphasis on developing managerial skills for small business ownership, rather than on only the development of vocational skills); and the need to cater to the whole age-group, not merely the small minority which continues on to tertiary study.

Educational and communication technology. Educational and communication technology covers print as well as non-print media, and so there is just as much concern with the production of low-cost printed learning materials for use in schools as there is with the use of television, video and computers. Member Countries, however, tend to stress the importance of non-print media in considerations regarding education and communication technology; similarly, this element will be emphasized here.

New communication technology, especially that which involves computers, television and video, is very much a part of the present technical and social milieu. All countries in the region recognize that it is essential that all children are equipped to cope with this new technology.

In education, the use of television has long been one of the accepted means for achieving distance learning at the higher levels of the formal education system. The apparent emerging trend now is for television to also be used for other types of education (such as adult education for rural populations in remote areas).

An important limitation of television education programmes transmitted by a central station is that they may be broadcast at a particular time that is not convenient for all learners. This limitation is being partly overcome by the introduction of video cassettes for use in learning centres. Countries are concerned with achieving a more effective use of video and television; an exchange of information about the production of audio-visual materials is occurring.

A key issue with regard to the use of video and television is that there tends to be a paucity of locally produced programmes in many Member Countries, resulting in countries being forced to rely largely on imported programmes. This can create special problems, especially when there is a clash between local values and culture and those portrayed in the imported programmes. There is clearly a need for an appropriate balance to be struck in this area.

Another major trend is the introduction of computer-assisted instruction (CAI) systems into the classroom. However, several important issues regarding the role and function of CAI are yet to be resolved—such as whether CAI should be directed mainly at contributing to educational improvement and quality training, or whether it should be merely an additional device to help familiarize youth with new computer technology. An important concern regarding CAI is how to best go about developing an indigenous capacity in software production; although many schools have the necessary computer hardware, few have adequate locally produced software for their systems.

In many countries the introduction of computers into schools has been uneven in coverage; while many of the private schools and elite public schools have ready access to this valuable new technology, the majority of schools do not. This situation tends to increase the inequalities between schools and their student populations usually along the lines of the socioeconomic status of the groups involved; it also increases the gap in learning outcome levels achieved among student populations.

A further potential application of the new technology is in the design and development of training manuals and multi-media packages for in-service training; such in-service training includes all categories of civil service workers: teachers, administrators and clerks. As concerns all such types of development, it is essential that technological training programmes for teachers are introduced at both pre-service and in-service levels to ensure that teachers have the necessary skills and knowledge to deal with the application of communication technology (whether television, video, print media or computers) to education.

Professional training (support services and distance education)

There are three main concerns in the professional training of teachers: the inculcation of a value system appropriate to a career in teaching; the imparting of specific new skills and knowledge; and the retraining of teachers to enable them to keep pace with new trends in education through in-service education.

As regards the first concern, the move has been to increase the entry requirements of teacher training and increasingly take into account attitudinal and personality factors (along with examination results) when selecting trainee teachers.

In terms of imparting new specific skills required of present-day teachers, there has been a trend in curriculum and programme development to integrate theory and practice and increase the use of such alternative means of training as using resource, curriculum development, research and educational technology centres. A linking of these centres as support services to teacher training institutes is also occurring.

As regards in-service training which endeavours to update a teacher's professional knowledge throughout his or her career, policy guidelines have emerged to link promotion criteria and procedures with periodic in-service teacher training, and to develop multi-media training packages for in-service training for all categories of teachers. Distance education programmes—involving television, radio and correspondence courses—for in-service teacher education are also widespread. An important issue involving in-service education currently being addressed in many countries in the region concerns the need to make this approach more systematic. Other trends and developments include:

- curriculum changes which place increased stress on producing a 'high quality' teaching service, a shift from a theory-oriented curriculum to one that is task oriented, concern for the overall training *and* education of teachers and, through the dissemination of information about programme content, a breaking down of barriers that sometimes occur within local communities;
- attempts to upgrade the status of teaching as an occupation in terms of its social standing, level of remuneration and conditions of service—the extent to which teaching can recruit talented people is dependent on the status given the occupation by society (which in turn is closely linked to levels of remuneration); and
- consultation with professional teacher organizations when seeking to achieve improvements and developments.

Science and technology education. It is widely agreed throughout the region that there is a need to equip young people with a fundamental knowledge of science and technology which enables them to develop and use appropriate skills in a meaningful way. A multitude of forces have triggered new trends and developments in science and technology education in Member Countries. These include: the need to actively respond to scientific and technological changes which influence the future and, in so doing, bridge the technological gap that is widening in some Member Countries; the harnessing of science and technology to enable self-reliant and indigenous modes of social and economic development, and make countries less technologically dependent; the acceleration of human resource development programmes to meet manpower needs for modernization and industry; the development of systems which enable a smooth transition to be achieved from primarily agricultural to industry-oriented societies and economies; and the encouragement of scientific modes of thinking which achieve increasing productivity in all fields and at all levels of human endeavour.

These trends are leading to new developments and a change in the emphasis of programmes, with science and technology education no longer being considered the exclusive domain of only a few children, youths and adults (whether in or out of school).

Many programmes seek to popularize science and technology at the local level in order to emphasize its relevance and importance. Science education is promoted through the mass media to generate basic science literacy and understanding, and new programmes are attempting to relate science and technology to the real-life needs and interests of people. This wider target group is, in turn, prompting the development of new modes of delivery and innovative programme content and support services to reach out more effectively to a diversifying client group. Education programmes in schools, non-formal education, universities, professional and technical training institutions and public extension services are all involved to varying degrees and at different levels in these new trends in the development of science and technology education in Member Countries. Apart from the governments in countries, agencies in the private sector, community groups, professional organizations and informal associations are increasingly participating in the formulation and implementation of science and technology education programmes and projects.

These types of trends are largely responsible for diversifying the structure and curricula offerings of educational institutions. Earlier practices in which the curriculum was drawn up within science itself, with an emphasis on conceptual knowledge, have changed. Newer approaches highlight the social needs and uses of science, a reduced emphasis on book learning, a greater use of the immediate physical environment, and the practical application of science and technology in such areas as health, nutrition, sanitation, population, environment conservation, and resource development and use. Science and technology have become an integral part of the school curriculum up to the end of the secondary cycle, with some general schools even running factories, farms and community projects, which, in turn, yield additional resources. School science is being linked more strongly to everyday situations, to the new technology and to issues in society and the local community.

Teaching modalities are moving away from teacher-centred learning to shared learning in classrooms to help create conditions in which teachers and students learn together. Teacher competence is being upgraded to enable the use of computers, the development of problem-solving skills and a creative outlook as regards science. Closer understanding is sought among science curriculum developers, teacher educators and science teachers, with regard to the interaction of science, technology and society in the context of the students' environment and their abilities to cope with contemporary problems and issues. Outside resource personnel, such as scientists and engineers, are also contributing to the teaching programmes in schools.

The increasing use of local, low-cost teaching materials, sometimes at the initiative of teachers themselves, has done much to help overcome the shortage of software and reduce the dependence on imported teaching materials. Member Countries are also strengthening delivery systems for adult and out-of-school target groups through such means as: training personnel; mobilizing new sources of expertise and resources; diversifying modalities of delivery through the use of books, posters, television, radio, magazines and correspondence; and increasing community involvement in such crucial areas as health, hygiene, sanitation and nutrition and environment.

One key issue which needs to be addressed is the tendency to associate science and technology with materialism and the concurrent erosion of traditional values. There is a need for education systems to encourage the development of an attitude in students which help ensure that modernization does not necessarily result in the erosion of traditional moral, social and cultural values of a society; students require a balanced perspective regarding both

'scientific' and 'non-scientific' aspects of life, so that there is no 'mystification' of the place and contribution of science and technology to society.

Related Issues and Trends

So far this chapter has examined emerging trends and developments of education which relate to particular subject areas in the curriculum. In addition to these specific areas of schooling, there are other important questions and issues which apply to the education systems of Member States *as a whole*, rather than just *to particular* areas of activity and policy making; these have important implications for the development of the systems of teacher education in the region. They include:

- the need to recognize that the pursuit of learning is a lifelong process;
- increasing the individualization of education and instruction;
- a reexamination and reorientation of teaching-learning strategies;
- the possible tensions created by the desire for a national core curriculum, while simultaneously attempting to democratize education through such measures as greater community involvement in the design, execution and monitoring of education programmes;
- decentralization of decision making, as regards the content of education programmes;
- an examination of the extent to which educational institutions should be autonomous, and a consideration of the social and economic costs and benefits involved when greater autonomy occurs;
- the immediate impact and long-term implications of the redistribution of educational funding between: different types of schools—primary/secondary (vocational) and pre-school/special education; formal and non-formal teaching and learning strategies; the primary and secondary school sectors, compared to the post-secondary sector; education of the average child compared to education for those who are exceptional (both intellectually and physically handicapped and talented children); and education of the socially, culturally and/or economically disadvantaged in comparison to education for the general population;
- a concern with finding ways to improve the quality and efficiency of education, so as to enable it to better contribute to the overall process of social and economic development and renewal in Member Countries;
- the reform and expansion of teacher education as a vital step towards the rejuvenation of public education;
- ways to reduce educational inequalities and disadvantages in Member States, especially as regards improving school retention rates and reducing the number of school drop-outs; and
- a concern with improving continuity between different levels in the school system to reduce the chasm that currently exists in some countries between each level of schooling.

These issues and developments have implications for the future of education, including teacher education and possible new reorientations and tasks that need to be initiated to prepare education systems for the twenty-first century. Some of the pressing questions which arise and need to be answered include the following.

- What are the implications of the issues and developments identified above for future educational innovations in Member Countries?
- What possible new tasks and new orientations are necessary to prepare education systems in the region for the next century?
- What should be done to strengthen networking in the region to facilitate the sharing of experience between Member Countries with regard to the types of issues, developments and innovations discussed in this report?
- To what extent and in what ways are the systems of teacher education in Member Countries being responsive to these trends and developments in school systems in order to equip teachers to deal with such developments?
- What adjustments need to be made to the systems of teacher education in the region to better enable them to keep abreast of such developments in schooling systems in the region?

The emerging trends and developments of education identified above are all firmly rooted in the past since they are partly the outcome of what has already occurred in Member Countries. Perhaps countries in the region should engage in a type of 'futureology' exercise in which are identified the developments in education they would like to see emerge in the future in their own particular countries and in the Asia and Pacific region as a whole. In light of such thinking, they may then be able to plan innovations and initiatives in teacher education which foreshadow rather than lag behind such developments. With these considerations foremost, this report will now review studies and reflections on the future of education in Asia and the Pacific countries.

The Future of Education

There are many studies and reflections on the future of education in Asia and the Pacific. These raise crucial ideas that might be utilized as building blocks for developing alternative regional future scenarios for education. These depend on the economic, political and socio-cultural contexts of education in different countries, which vary a lot and are factors to reckon with in any consideration of the future of education. The interaction between societal forces and patterns of educational development at the national, community and individual levels are obviously very complex. Some of the main issues that need to be resolved, because of their substantial impact on the development of future scenarios for schooling and teacher education, include the following.³

Development and traditional values. Development is one of the ultimate goals of education for the future. However, development has at least two main aspects: socio-economic development, which is materialistic in nature, and socio-cultural, which is, by and large, concerned with preservation of cherished values and traditions of a country.

Some countries in the region have attained unprecedented economic development so that, by virtue of higher per capita income, people appear to be economically better off.

3. Based on Dr. Leonardo de la Cruz's paper 'Studies and Reflections on the Future of Education: A Review,' 1987.

However, many complain about the erosion of desirable cultural values which have been handed down from generation to generation.

Some believe that cultural values need to be modified in line with socio-economic development. For example, one eminent social scientist from the Pacific region contends that the whole idea of growth and development is bound to bring about continuous change in technologies and value systems (Eveli Hau-ofa, 1986). He suspects some insidious motive behind the seemingly humane concern for the preservation of the traditional values of the Pacific islanders, including keeping sections of the communities contented with their relative poverty and oppression. This author cites the following traditional values of islanders which are often inconsistent with the quest for development:

- primacy of group interest over interests of individuals;
- sharing of goods and services;
- a sense of place and social continuity;
- intimacy of personal relationships;
- flexibility of social relationships;
- self-sufficiency and self-reliance;
- caring for members of societies (such as the aged); and
- indigenous religious-based entertainments.

In an effort to preserve cherished socio-cultural values, a number of countries have emphasized values education (e.g. Philippines) or moral education (e.g. Japan and the Republic of Korea). One of the main projects of the Southeast Asian Research Review and Advisory Group is to study the 'state of the practice of values education in Southeast Asia.'

Values education, however, is not a monopoly of the school. The family and religious centre play even more important roles. Paradoxically, sometimes the school acts to negate the values learned at home. For instance, the co-operative ethic may be a virtue stressed at home, but competitive ethics dominate in schools. There is, therefore, a need to continually re-examine certain socio-cultural values in relation to a country's national development goals with an aim to modifying those that are obstacles to desirable developmental efforts.

Indigenous development. Following the Second World War, there was an upsurge of nationalism which invariably led to liberation of colonial lands and political independence for many countries in the region. This also meant efforts in some countries towards educational reform in line with indigenous development, including the use of the national language as the medium of instruction. However, to some extent, use of national language tends to restrict the free flow of scientific knowledge from other countries, as efficient and accurate translation is often a constraint.

Some countries, however, are politically independent, but remain socio-culturally linked to the former country-colonizer. In these cases, there is an increasing concern for the continuing influence of what is referred to as 'metropolitan power.' Promises of increasing aid and assistance from developed countries are the beginning of affiliations that could influence education significantly. Foreign books and overseas television and video programmes, however, affect the values, cultures and traditions of the people in recipient countries.

Equity in education. Education for the future invariably includes provisions for equity. It projects greater equality both in opportunities and access. In many countries, certain

groups (such as lower caste, girls and women) have little access to educational opportunities. To help overcome this problem, most countries now provide for equal educational opportunities; however, in many countries such provisions hardly go beyond lip-service, as equality of access has not been made adequately available. For instance, many remote and isolated rural areas do not have schools, primary education is compulsory but not really free, and many poor children cannot go to school because they either have no clothes and/or the school is too far from their homes.

Moreover, in many countries, school learning is relevant only to the needs and requirements of those who are expected to ascend the educational ladder—not to those who will leave school upon or even before completion of primary schooling. In some instances, schooling makes many young early school leavers dysfunctional to their communities.

Equity remains elusive in many countries for, as one Indian educator says, 'education by itself cannot bring about equality in an unequal society or justice in an unjust social order' (Adiseshiah, India 1985). By and large, there is a predominance of inequality in the region—in wealth, income, privileges and rights. Except in a few countries, only a small number of people have great wealth; the vast majority live amidst extreme poverty, deprivation and squalor.

For many of the poor, education provides hope of upward social mobility, hope that they might free themselves of the shackles of dire poverty. For these people, education is an instrument for social mobility and success.

Education and national unity. In planning for the future, the quest for national unity remains very much on the agenda, despite the fact that most countries in the region obtained independence after the Second World War. In many countries there appear to be constant threats to national unity, largely due to various forces dragging them towards divisiveness. For instance, in many countries, the existence of many different languages, and their underlying socio-cultural context, has been a potent divisive factor.

For example, in Malaysia, education is envisioned to serve two important functions: a means to achieve national unity, and a vehicle for national development. Since 1964, English was slowly replaced by Bahasa Malaysia, the argument being that a national system of education using a common medium of instruction, in addition to a common syllabus, will provide a strong base for promoting national unity. Unfortunately, the policy has created inter-ethnic tension, in view of the fact that in Malaysia about 53 per cent are Malays, 35 per cent are Chinese and about 11 per cent are of Indian origin (S. Husin Ali, Chang Yii Tan, Tan Boon Kean, 1987).

In India, a three-language formula has been adopted—that is, one's regional language, Hindi and English. However, elite 'public' residential schools and day-public schools in the cities continue to use English. These schools cater to those who can pay exorbitant fees. It was noted that the all-Indian labour market, usually consisting of professional, technical and qualified persons in organized central government or large organizations, is drawing heavily upon well-educated, public school, English medium students. The three-language policy tends to stratify Indian society into those speaking the regional language, Hindi and English—with the first two ascribed lower status in society in relation to those educated in English.

In the Philippines, a bilingual medium of instruction has been the policy. Such subjects as science and mathematics are to be taught in English, whereas social studies and vocational courses are to be taught in Filipino the national language. However, in high-standard, sectarian (Catholic) and high-fee charging schools, English is mainly used—except for the language subject, Filipino. Entrance examinations to the high-standard universities are also predominantly in the English language. Similarly, expertise in communication skills in English is a crucial criterion for choice and high-paying professional jobs. Hence, youngsters who go

through the public schools (government schools), where a bilingual medium is used, are at a great disadvantage in relation to those educated in English medium schools. By and large, those who attend public schools are children of poor people who cannot afford the high fees charged by high-standard sectarian private schools; by nature of their sub-standard education, a poor child's desire for upward mobility is invariably thwarted early in life.

Quality, Efficiency and Innovation in Education⁴

This section provides an examination of quality and efficiency as they relate to innovation, because these concepts are currently receiving great attention, with regard to the organization of education systems in the region, and have important implications for the design of teacher education systems.

The focus on quality arises out of an intention to improve education and because many of the quantitative aspects that were of concern in earlier times have now received attention. The focus on efficiency has increased in importance because of the need to make better use of scarce resources and avoid waste.

Quality, as it is used to describe education systems, is neither value-free nor absolute. As in everyday usage, it is taken to imply 'good quality. In turn, the quest for 'good' quality implies that the present quality is not good enough and that improvement is desired. The level of quality existing or desired is always relative—to culture, context and expectations.

Efficiency is similarly context-bound and can rarely be regarded as absolute. It is taken to mean the best and most economical use of resources (human, physical and financial) to achieve desired objectives in the best times.

Many different aspects of education are coming under examination with respect to their quality and efficiency. Furthermore, countries differ quite markedly over a number of matters, such as what is of most concern to them, what levels of quality are sought, and what will be accepted as efficiency. Even so, there is enough common ground for quality and efficiency to be treated in general terms, as well as in specific terms.

Quality. Issues of quality arise at all levels in education systems. They bear on policy making, system management, school organization, the teaching of subjects and how pupils respond to each other. They raise large fundamental questions—such as what education is of most worth, what values should a society promote, and what sort of citizens should education produce. They also raise day-to-day questions—such as how best to teach social studies, what teaching aids will work with handicapped children, and how to make sure school rooms are safe.

Whatever the level in practice, quality usually is concerned with the improvement of some condition (such as better learning, smoother organization, better resources) which is most often related to some baseline, standard or criterion.

Pupil quality. The most important evidence of quality in an education system is to be found in the quality of the pupils/students produced. The problem, however, is to arrive at satisfactory 'indicators' which will show that better quality education has been achieved. Accordingly, much discussion of quality centres around 'levels' or 'standards' of pupil/student achievement, usually in comparison with a previous time or another group of performers. For example, the ability of the present generation to spell or do arithmetic, or be courteous, hard-working and well-behaved, is compared with the skills of past generations; girls' achieve

4. Based on the working paper for the eleventh regional consultation meeting on APEID prepared by Prof. R.S. Adams on the basis of a region-wide survey conducted by ACEID in 1988.

ments are compared with those of boys, and achievements of members of ethnic groups are compared with the national average.

In a sense, increased enrolments and reduced drop-out rates are taken as indicators of improving quality. Sometimes international comparative studies of education provide indicators also. For example, the International Educational Achievement (IEA) project, which has been going on for more than a decade, compares pupil performances on standardized achievement tests in a number of subjects. At other times, performances in public examinations are sometimes used as indicators, although there are many reasons why such a practice is suspect, especially if one school's performance is compared with another's without recognition of different socioeconomic contexts and initial performance baselines.

As well as seeking quality indicators of academic performance, the public is likely to want indicators that reflect other, less tangible criteria, such as conduct, moral behaviour, temperance, tolerance, patriotism, loyalty and other 'qualities' which are considered desirable in a good citizen. Educators would also want other indicators of quality, such as knowledge, understanding, intellectual integrity, creativity, and a love of learning. Quality, as a concept then, is not easy to 'tie down' to specifics.

System quality. It is also the case that qualitative judgements are made about conditions in other parts of the education system—for example, the performances of principals, inspectors and, in particular, teachers; or material and physical aspects, such as buildings, equipment, textbooks, and teaching resources. The implication is that they all can have an effect on the quality of the behaviour or achievement of pupils/students.

This incidental effect on student quality is often the main reason for undertaking a qualitative improvement in any part of the system. For example, reorganizing the 'stores distribution section' is done to ensure that supplies will get to teachers faster, and that their teaching will improve. Sometimes, however, the judgements themselves may not be directly related to pupil/student performance. For example, school design and decor may reflect aesthetic or engineering qualities rather than educational criteria. Other judgements may relate to financial considerations rather than truly educational ones. Because sometimes the connection between an improvement in one part of the system and pupil/student performance may not be quite clear, there is reason to ask two questions: Will this reform or innovation really impact on teaching/learning situations? Is this the best way to spend the amount of money available?

Efficiency. Within those questions lie two dilemmas. The first relates to deciding where to put the investment of time, money and resources. What would be the best order of priority to achieve the greatest effect? The second concerns how to best adjust the mixture of inputs into the system to increase efficiency—how to get the best balance between curriculum reform, materials production, reorganization of structures, teacher training (in-service, pre-service), introducing new technologies, and improving the educational environment.

In making such decisions, it is worth keeping in mind that, although all aspects of the system have the potential to impact on the teaching/learning situation, each aspect, depending on its condition, can become a barrier to achieving the desired level of quality.

The difficulty in coping with the complex array of factors which might influence educational quality is apparent. It is not surprising, then, that educational organization, management and planning are particularly important at the highest level and the lowest—from the system level, through school level, to the classroom level.

It is also apparent that the way in which the education system interfaces with the community will effect quality, efficiency and judgements about education. Clearly, schools and

parents (and the community), if they combine their educating capabilities, will be collectively more effective than if they work apart from or even against each other. Furthermore, the community will judge the education system, assessing its quality and efficiency. A system which is insensitive to community wishes and needs,—which does not heed, for example, the wishes of the labour market, ethnic minorities, or legitimate pressure groups—will increasingly come under criticism.

Innovation. One of the questions that is being increasingly considered by countries in the region is: How best may innovation improve quality? It is not possible to answer that question in general terms other than to say that, if the current quality needs to be improved, something new will have to be done. Even if the question were rephrased—such as: What innovations are likely to best improve quality? (whether it be in the schooling system as a whole or teacher education in particular)—the answer is still elusive because it depends on what aspect is under consideration (mathematics achievement, moral behaviour, cognitive capability, skill development, the performance of the disabled) and what is known to work best in the specific aspect (for example, a great deal is known about improving learning to read, but not much about values education or high-level computer-assisted learning).

There is, however, considerable consensus in the region that teachers are of central importance in improving the quality of education. This implies that innovations in (in-service and pre-service) teacher training are a good form of investment. Many countries are using different kinds of approaches, such as field-based training, 'school clusters,' school self-review and development, courses of various durations, distance learning methods and visiting advisers.

Great reliance has also been placed on curriculum innovation as a device to improve quality. Indeed, the curriculum sets the limits on what may be achieved. However, while it is desirable to have a curriculum that is balanced, relevant, interesting and useful, curriculum innovations run into a particular stumbling-block. If the teachers do not understand the reforms, cannot apply them, and/or are not committed to them, they will not be able to carry out the reforms. Neither teachers nor anyone else can be easily won over to change, particularly when that change entails considerable inconvenience, hard work and loss of time, and also carries with it the implication that what they were doing before was inadequate.

Regrettably, there is no single suitable answer to the question: What will best improve quality? Regrettably, too, some investments may result in greater dividends in the long term than in the short term.

If organization, management and planning are of importance in the day-to-day pursuit of quality and efficiency, they are even more important in the undertaking of innovations. There are three critical aspects of the innovation process. First, the prototype innovation has to be created—devised from the beginning, adapted from something existing or imported from elsewhere. Second, it has to be introduced into the system somewhere (usually on a small scale). Third, it has to be spread throughout the system.

It has been established that carefully planned design and development is useful for ensuring that prototype innovations are viable. It has also been established that planning is necessary to enable innovations to be judiciously introduced into the system (usually on a small scale and as a trial). However, what is not so readily recognized is that the (large-scale) implementation of an innovation, spreading it throughout the system, requires its own separate planning as well. Many innovations have failed simply because the ways of moving from the experimental and introductory stages into widespread application have not been adequately worked out.

If planning is necessary at all stages in the innovative process, then innovation strategies become all important. Research suggests that a number of key factors are significant for efficient innovating. These are:

- enlisting the support of decision makers and others who are in a position to prevent or handicap the innovation;
- ensuring that cultural and social norms are observed so that offence is not given;
- countering apprehension that the innovation may threaten (the power of) established groups (such as teachers, principals and parents);
- avoiding creating the impression that the innovation is *too* different from existing, traditionally valued practices;
- creating balance between 'over-selling' and 'under-selling' the innovation;
- ensuring that evaluations are relevant and useful;
- identifying the 'critical mass' of resources needed—those necessary and sufficient;
- ensuring stability of staff to avoid disrupting programme continuity; and
- adapting to unexpected and changed circumstances (even though they violate initial objectives and project specifications).

All of these considerations, including the mechanisms of innovating, have important implications for the innovations and initiatives in teacher education examined in this report.

We will now turn our attention to an examination of important aspects of the changing status and roles of teachers in countries in the Asia and Pacific region, because this has important implications on the types of teachers we need to train in our universities and colleges, as well as for the design of our systems of teacher education.

Changing Status and Roles of Teachers⁵

A Unesco publication, *The Changing Role of the Teacher*, states: 'There was a time when the teacher's role was to pass down to the younger generation the knowledge, experiences and mythology of a slowly evolving society. The pace of change in contemporary society has made this role redundant. The modern teacher must be, among other things, a change-agent. It does not matter whether one is addressing the situation in a developing country or an industrialized nation, the problem remains the same. What are the new dimensions of his [or her] role, and how is the teacher to be trained to fulfil that role. In examining the changing role of the teacher we need to see the changes as being a response to, and an attempt to confront, the pressures of a society undergoing constant transition.' (Goble and Porter, 1977)

Implied in this quotation is the changed role of education—that is, from one of transmitter of culture to one of transformer of culture. *Transmission* of culture refers to culture as relatively static and sees mankind's role as being a relatively passive one in which culture shapes the individual, while *transformation* of culture connotes that mankind is a creator of

5. Based on the paper prepared by Dr. Leonardo de la Cruz and Dr. H.K Paik, entitled *Changing Status and Roles of Teachers in Asia and the Pacific: Implications for Educational Developments*, 1988.

culture. It is of course quite difficult to take just one of the two views, because man is both a creator and a creature of his culture. This has clear implications for what is expected of teacher educators and teachers.

This particular section, which deals with the changing status and roles of teachers in the Asia-Pacific region, begins with the quotation from the Unesco publication for three reasons. First, it illustrates the fact that the impact of economic, social and cultural changes on the role of the teacher is an area that has been of long-standing interest to Unesco. Second, it highlights the issue as being a persistent one which requires the development of long-term rather than short-term strategies and solutions. Third, it shows an area of concern that transcends national boundaries, because all countries, both developed and developing, seek more effective ways to better equip their teachers to more adequately cope with their roles in the classroom, school and local community.

What is stressed is that education is a dynamic not a static phenomenon. Changes in society are always reflected in educational structures and reforms, such changes often being the result of a continuous process of scientific and technological development. These processes of change have also been accelerating exponentially.

Changes have tremendous implications for educational development. For teachers, this also means change via in-service education/training and, more importantly, through self-education to update knowledge and skills—which is not easy to effect.

While countries in the region are culturally diverse, they also face certain common categories of problems, and so it is anticipated that they can perhaps do more (through mutual co-operation) to devise some common solutions to those problems. In view of this and to help ensure that limited human and financial resources are used most effectively and efficiently in the interest of developing high-quality programmes, there is a greater need and possibility for sharing resources in the region through the development a multi-state or an intra-regional approach to teacher education than is currently been explored.

Social Change and Education

Nature of change. The main changes that are impinging on education today include change in population (both in numbers and distribution), economic possibilities, the use of resources, political alignments, and science and its application. These are some of the areas in which the shape of the future is being altered. The task of all societies is not simply to be inundated by change, but to accept that change can be directed—and often controlled. The question is: Can education be used to direct change?

Social change. The growth of industrialization on a world-wide scale is a major factor in social change, particularly in its impact on developing countries. World communications networks are such that the effects of events in one area are felt and responded to throughout the world. This broadening of impact occurs in many areas: ecology, where pollution occurring intone region may have its greatest effect elsewhere; politics, where decisions and actions in one country immediately affect the world scene; economic problems, which cannot be restricted to a particular country; and economic production, which is dependent on the communication patterns of the world and the demands of many countries. It is in the interrelationship of all these areas that the social effects of change are most felt.

Science and technology. Perhaps the most pervasive of the various changes which have implications for education is in the fields of science and technology, which are urgently needed by developing countries. It is clear that developing nations are likely to be left even

further behind if they do not keep abreast of new developments and take steps to harness them for their economic salvation.

The phenomenal developments in science and technology tend to accentuate the materialistic tendency of mankind. The forces of materialism bring with them a new rationality and modernity that erode and, in some cases, destroy social institutions with its traditions, its value systems and its morality. In the process of adapting to the material order, man has compromised his traditions, morality and value system. And so, there is a growing tendency for educational systems to gear themselves mainly to the dictates and demands of the material order.

Many educationalists in the region believe, therefore, that a desirable future education should exist side by side with science and technology and development, equally stressing the motivation and preservation of human values. It could be argued that future education needs to emphasize harmony between science and ethics. A new spirit of humanism in the age of materialism and scientism will have to be cultivated so that humanism may become an inseparable part of mankind.

J.E. Jayasuriya, referring particularly to the situation in Sri Lanka, points out that 'society in the twenty-first century would be exceedingly complex largely on account of the advances in science and technology that would take place in the years that lie ahead. It would be a highly competitive society in which groups would vie with one another for power and the enjoyment of material goods. Human values and considerations would have no place and the ethos would be one of superindustrialism. There would be an information explosion but few would be able to take advantage of it. Power would be concentrated in the hands of an affluent minority, and the masses would remain ignorant and exploited. Pockets of poverty in the world would remain much the same as they are at present or even become more marked and pitiable, as the forces of science and technology would not be harnessed towards their elimination.'

This has important implications for the functions of schools and the types of teachers we need to train to help equip students to live in such a society. The disparity between various members of the population will not only be within countries but also between and among countries in the region, especially between the developed and developing countries. VTR systems, communications, satellites and computers are now widely used at the school and university levels in Japan and Australia, while many developing countries are still struggling with the use of radio in school education.

The future: sane schools of thought. There appear to be four schools of thought regarding the future of education. First, there are those few who believe that 'whatever will be, will be.' This idea is entertained largely by people who, because of the existing difficult political and socioeconomic conditions prevailing in their countries, cannot afford the luxury of worrying about the future. Second, some think that the events of the past and the present are dynamic forces which help shape the future; they believe that the future can be projected and extrapolated on the basis of established trends and developments. Third, there are those who subscribe to 'if this, then that' propositions and who tend to visualize alternative scenarios ranging from pessimistic to optimistic. Fourth, there are those who believe that since the future does not exist it can be designed, shaped, or even controlled. They argue that, although man cannot change the past, he can influence the future.

The attitudes of policy makers in a particular country regarding these four views about the future of education will have an important impact on the characteristics of its systems of schooling and teacher education.

Implications for education. Education will play a key role in shaping our futures, for it is both the inheritor and communicator of what is seen as being most valuable in our cultures.

This is largely true in terms of the creations of the past, these creations occurring in a variety of fields, such as architecture, sculpture, painting, poetry, drama, dance, philosophy, mathematics, literature, science and technology. Education also can act as a designer for the future, in that it will, to a considerable extent, help form the personal qualities of the generation on which the future will depend. It does this in terms of their knowledge and understanding, their skills, and their attitudes and values, which will, in the final analysis, determine that future. It is education's task to help all individuals define and develop those qualities. This is not a task for education alone; religious institutions, political institutions and families also play a part. However, the role of education is unavoidable. To effectively carry out its role, education must first evaluate and reshape itself. One key problem in achieving this is that education systems are mainly geared to coping with the present and solving current problems.

Response of societies to change. Education has an important part to play in helping people develop a positive attitude towards changes in society. Education helps by providing knowledge and understanding through the development of skills and the promotion of attitudes which future citizens will need in order to cope with the diverse issues they face. However, education systems often are not always 'forward looking' because, in periods of rapid growth, most education systems have been oriented towards immediate problems: building and enlarging schools, providing better and sufficient equipment and books, and training teachers. Little time has remained to lift the gaze from the immediate issues to look ahead and engage in forward planning to better cope with what is likely to occur.

It is not easy to change this orientation. Present problems always appear as being the most urgent and so administrators in education, as elsewhere, understandably devote most of their attention to them. Yet, if we cannot look ahead effectively, our education systems will not be able to modify, develop and change to cope with their vital tasks in society. As a result, our problems will grow larger and more intractable because we are dealing only with current manifestations rather than long-term causes. Our education systems, like our societies, must develop the capabilities to look ahead, anticipate and help form the future. This is not meant to belittle efforts to solve current problems that contribute, for example, to the prevalence of illiteracy, the lack of accommodation to effect universalization of primary education and the continuing erosion of the status of teachers brought about by such factors as the declining real income of teachers. However, for as long as we are treating the symptoms rather than the root causes of these problems, we are unlikely to be effective in curing such social ills.

A redesign of our education systems (including teacher education) is essential if they are to be more effective in policy development for the long term and yet still retain their capacities to cope with the present. Since it is unlikely that there will be major increases in resources for education, the redesign of education systems will clearly need to make better use of current resources, both human and material. To accomplish this, we must aim for both quality and efficiency.

Teacher training for changing needs. Unesco, in general, and Unesco PROAP, in particular, have very rich experiences in the field of teacher education in Asia and the Pacific. Ever since the formation of Unesco's Asian Centre for Training of Teacher Educators attached to the University of the Philippines, and especially after the establishment of APEID in 1974, many activities have been undertaken and a substantial number of publications have been produced which relate to the changing status and role of teachers in the Asia-Pacific region, and the implication of these changes for educational innovation, reform and development.

It is recognized that, to assist teachers in adapting to their changing occupational roles in schools and society, much innovation and reform is necessary in the professional training of teachers, in the professional support services available, and in the use of non-formal and

informal teacher education methods and distance education. It is only through such innovation and reform that the career-long professional development of teachers is possible. We have noted that all of these new challenges for teachers, which have occurred as a result of significant developments, innovations and reforms in the education systems of Member Countries, have resulted in an increase in the diversity, complexity and responsibilities associated with the teacher's role. They also have far-reaching and challenging implications for changes in the occupational status of teachers, some of which are yet to be fully realized. What is to be worked towards is a situation in which, as the demands and responsibilities of teachers increase, an appropriate advance in status and reward occurs. This increasing status, which should occur at the 'ideas' level, must be accompanied by improvements in teachers' economic and social situations in society. In recognition of the importance of the teacher's function in society in general, and within the school system in particular, there is a need for all of us to endeavour to ensure that working conditions, remuneration and other material benefits accorded teachers are comparable to other similar professional groups. Unless this occurs, teaching will not be able to attract the qualified and dedicated people it needs to ensure that desired developments and innovations are realized. Unfortunately, there seems to be an inverse relationship between a teacher's role and status—that is, as the teacher's role increases, so the teacher's status declines, largely due to a low income/salary.

Unesco's commitment to helping improve the status of teachers is a long-standing one. As early as 1966, Unesco provided a joint commentary with the International Labour Organization on the subject (ILO/Unesco, 1984, *The Status of Teachers*). Since 1966, Unesco and the ILO have been jointly responsible for promoting the Recommendation Concerning the Status of Teachers and monitoring its implementation in various countries. The status of the teaching profession depends to a considerable extent on teacher educators and teachers themselves. It is therefore suggested that both teacher educators and teachers seek to achieve the highest possible standards in all of their professional endeavours—and, in so doing, become professionals, in the true sense of the word.

Conclusion

This chapter provides an overview of the trends, reforms, developments and issues currently occurring and emerging in the education systems of countries in the Asia and Pacific region. It has examined the main emerging reforms in education and schooling in the region, the possible future of education, improved quality and efficiency in education as a major concern of Member Countries, and the changing status and roles of teachers. Too, it establishes the broad educational context within which the innovations and initiatives in teacher education are occurring.

Chapter 2

REVIEW OF CASE STUDIES OF NATIONAL SYSTEMS

Volume two of this report presents detailed case studies of innovations and initiatives in teacher education in fifteen countries in Asia and the Pacific region. This chapter provides a summary of the country survey studies, focusing on the needs for teacher education and suggested plans of action, and identifies the main reforms and developments in teacher education occurring in the region. Country summaries are presented in alphabetical order.

Australia

Background

Australia has moved from a substantial shortage of teachers in the 1950s and 1960s to a position of oversupply in the 1980s. This change is due in part to the large reduction in teacher resignation rates, especially women teachers, and the leveling off of student numbers in schools. There was a substantial expansion in teacher education in the 1970s with the addition of many new institutions, including many colleges of advanced education and some universities. With the reduction in demand, there have been amalgamations of colleges and some amalgamations between colleges and universities. The predominant pattern of preparation is the B.Ed. for primary teachers, usually three years plus teaching experience plus one further year, and a Bachelor degree plus Diploma of Education for secondary teachers. There was a substantial national inquiry into teacher education (NITE, 1980) in 1980 but most of its recommendations have not been acted on. An initiative of the Federal Minister for Education in November, 1986 indicates the likelihood of another inquiry.

Issues

Provision. There are still shortages of teachers in some specific areas, such as mathematics, science, and computer technology.

Initial preparation. The organization of field experience remains a major concern, as are the processes for its evaluation. Some consideration is being given to teachers of years 7 and 8 (beginning secondary) teaching a wider spectrum of subjects. There is general concern over the uniformity of teaching approaches.

Career development. Induction occurs with little contact between school and training institution. Considerable emphasis is being given to the professional development of teachers, including in-service education. School-based, system-based and institution-based courses have their place.

Teacher education personnel. With the reduction in numbers of students in training there have been substantial cuts in financing for teacher education. Few new appointments are being made; this will lead to an increasing remoteness of teacher education staff from schools.

Support services. Two major factors strengthen the need for support services: the emphasis from official reports and other studies on the need for change in secondary education; and the rapid impact of technology, including information technology, on the ways people learn and gain access to information.

System links and cohesion. The responsibility for teacher education has moved entirely towards training institutions and away from departments of education.

Needs

- a closer relationship between practical experience and theoretical studies in pre-service courses;
- an organic link between pre-service courses, in-service activities and the regular work of schools, involving co-operation between departments of education, training institutions and schools;
- means of introducing new teacher education staff and developing stronger links with schools and education systems for existing staff;
- teacher education staff involvement in curriculum initiatives (redevelopment of secondary education, use of new information technology); and
- an enhanced capacity in teacher education institutions for self-evaluation and the development of more varied and effective teaching and research processes.

Future Plans

The Federal Government recently formed the Commission for the Future to act as a focal point for institutions, groups and individuals, focusing on decision making as it may help to form the future. This indicates the need now felt by all institutions to increase their capacity for a more initiatory role in policy development, rather than having the opportunity only to react to problems after their appearance. This is a very lively aspect of current Australian society, as it seeks to develop its organizations and institutions in ways which are more responsive to social and individual needs and which obtain wider participation by people in the decisions which affect them.

People's Republic of China

Background

Since the end of the ten-year turmoil of the 'Cultural Revolution' in 1976, the Chinese Government has constantly emphasized the significant role of teacher education. In light of the open-door policy and the Four-Modernization Drive, teacher education is perceived as a 'machine-tool' of the educational cause and the fundamental base for cultivating a new generation ready to commit itself to the challenges of modernization, the world and the future.

Issues and Needs

- a need for in-depth perception of the importance of teacher education in today's world and in China, and radical changes in the status of teachers and teacher education as a profession. A Law of Teachers is to be developed;

- an increase in funding and improvement in teaching conditions, with priority given to teacher education institutions in terms of
 - the distribution of finances, personnel and facilities;
 - arrangement for capital construction;
 - recruitment of teaching staff; and
 - admission of excellent candidates;
- expansion and reform of enrolment:
 - the emphasis on training junior secondary school teachers, teachers of the 'shortage' subjects, and teachers in border areas and minority regions;
 - priority in selecting candidates for admission;
 - the practice of recommended-based admission, with strong control over the academic achievement, the development of morality, intelligence, physical constitution, and a willingness to be devoted to the career of education; and
 - experiments of oriented-enrolment programmes, in which the local bureau of education is authorized to select candidates who have to be assigned upon graduation to teach in localities from which they come;
- the establishment of multi-level, multi-pattern networks for in-service teacher education:
 - the need for a 'lifelong learning' concept for in-service teachers;
 - the nation-wide expansion of short-term classes, single-subject training classes, spare-time studies, correspondence courses, radio-TV courses, and audio-visual courses;
 - the initiation of general universities and colleges in teacher training programmes;
 - the active involvement of academic societies, professional organizations, government agencies, and other political and social forces in in-service teacher training programmes;
 - the establishment of lecture teams for teacher training to work in the less-developed areas; and
 - the access of self-taught examination systems for in-service teachers;
- priority in development of teaching personnel for teacher education institutions; recommended-based admission for normal school graduates to the higher teacher education institutions on the condition that they must return to teach after graduation; and more opportunities for teachers' advancement studies through:
 - the establishment of Centres for Teachers' Advanced Training;
 - the provision of post-graduate programmes for in-service teachers; and

- the development of exchange and co-operative programmes with universities abroad; the practice of contract-based recruitment and the teacher promotion system; and the rejuvenating of the teaching force;
- teaching innovations for better quality of teacher education:
 - guiding principles—teacher education institutions at all levels should effectively serve the implementation of nine-year compulsory education, and the improvement of basic education in the era of new technology;
 - the overall goal—to reinforce political and ideological education and career orientations so as to cultivate cultured persons as teachers with lofty ideals and high morality, showing discipline and a sense of mission as educators—'the engineers of the human soul' and 'the gardeners of the nation's flowers';
 - reorganization of specialization in accordance with the current changes in school curriculum and programmes (e.g. the need for teaching physical education, music, arts, physiology, hygiene, computer science, vocational education, etc);
 - the cultivation of creative imagination and independent, innovative thinking, as well as the competence of teaching, rather than a mere transition of knowledge;
 - updating educational courses, and making educational theories integrate with practice;
 - the priority of educational research; and
 - widespread use of media and the establishment of satellite programmes for teacher education (begun 1 October 1986);
- the reform of contract and administration:
 - establishment of the Teacher Education Department under the State Education Commission;
 - proper division of control between central and local government;
 - ongoing evaluation of teacher education programmes being made as a basis for accreditation and control over the quality of programmes;
 - the practice of teacher certification;
 - restrictions against the distraction of job assignment in other positions; and
 - the need for close co-ordination between pre-service and in-service teacher education.

Future Plans

In 1985, the State Education Commission proposed a fifteen-year (or longer) plan for fostering a qualified, stable and sufficient teaching force for elementary and secondary education with rational ranges of age, speciality, and level, as follows:

- Phase 1 (in 5-7 years): The stress would be on the reorganization and retraining of existing in-service teachers and the replenishment of 'shortage-subject' teachers.
- Phase 2 (in another 5-7 years): The further replenishment and cultivation of qualified teachers in all subjects.
- Phase 3 (open): The establishment of higher standards of qualification for the teaching force both in academic preparation and professional competency as teachers.

India

Background

There are nearly 3.5 million teachers in the formal school system. Primary school teachers are required to have ten to twelve years of general school and two years of professional education. Secondary teachers must have a minimum of First Degree from the university and one year of professional education. In general, there is no dearth of manpower; difficulties exist, however, in some parts of the country. Teacher salaries are lower than salaries of other services. The Government of India set up a commission to study all aspects of teacher preparation, including their service conditions. Recommendations are currently pending with the Government and will be implemented in light of the recommendations of the Pay Commission (1986) and the National Policy of Education of 1986.

Issues

Curricula for pre-service education of teachers do not get revised often enough in response to changing circumstances. The revisions have to be reflected by nearly 100 universities and 31 state departments of education.

There is a mismatch between teacher education programmes and the availability of teachers in different subjects/geographical areas and for special groups (tribal and socially-deprived groups). Shortages of teachers exist in fine arts, music and vocational areas at the secondary stage.

The profession is not able to attract higher calibre graduates from the universities and Boards of Secondary Education. Low salaries and poor living conditions in rural areas are considered responsible.

Time available for pre-service education of teachers is inadequate for development of necessary attitudes and values. At the secondary level, little attention is paid to competence in subject matter. Induction programmes are not available.

There are several institutions and systems for in-service education of teachers, ranging from school complexes at decentralized levels to programmes designed and executed at the central level, but co-ordination between various agencies is yet to be obtained. A self-contained system of planning, monitoring and evaluation needs to be developed.

Distance education, especially through the electronic media, needs to be extended.

Elementary teacher education is manned by personnel educated for secondary education. Separate provisions for preparation of elementary teacher educators have been provided at only a few places.

Future Plans

Comprehensive institutions are being set up at the district level to look after the pre-service education of teachers for elementary schools and instructors for the non-formal and adult education programmes, as well as in-service education of teachers. The institution will be well staffed with proper infrastructure.

An extensive system of in-service education should be developed with institutions at the central, state and district levels having clearly defined responsibilities for programme planning, monitoring and evaluation.

Distance education via electronic media communications could be heavily used to meet the needs of large numbers of teachers.

Teacher education institutions are to be appropriately equipped to prepare teachers in the use of computers.

The National Council of Teacher Education will be given appropriate status and powers to improve teacher education in the country.

Japan

Issues and Needs

With regard to conventional programmes for teacher education, the content of professional courses and other subjects offered as part of teacher education in many universities has not sufficiently improved to cope with recent changes in the mental and physical condition of children, or the changing curricula of primary and secondary schools.

Shortage of Schools for Practice Teaching

The notable increase in the number of applicants for teacher certificates has made it difficult for students to find schools in which to carry out practice teaching. As a result, practice teaching is done rather perfunctorily and superficially.

Inadequate Training for Teacher Educators

Currently no provision for training teacher educators has been developed. Selection procedures for teacher educators belong exclusively to the faculty or department concerned in each university. The existing practice is almost the same in the cases of other faculties (departments), such as law, economics and business administration. Academic achievement of the candidate is the most important factor in the recruitment of 'teacher educators.' This means that no intensive consideration has been taken concerning the eligibility of teacher educators; many of the teacher educators may have been scholars or researchers in educational science, and they rarely have prior teaching experience in primary and/or secondary schools. Teacher educators tend to be academic-oriented. In selection procedures, therefore, practical aspects of the candidate are too often neglected.

Difficulty in Teacher Recruitment

The decrease in the number of teachers employed is likely to continue for the next two decades due to the decrease in the number of children; this has resulted in an imbalance between those who have obtained teacher certificates and those who actually work as teachers.

Lack of adequate training programmes for beginning teachers. At the beginning of the teaching career, it is important to provide adequate training programmes for beginning teachers to help them make a successful start of their educational service. However, beginning teachers today are treated as if they were veterans experienced in school and classroom instruction, when in fact they've had only two or four weeks practice teaching at a university.

Duplication of INSET programmes. The division of responsibilities among national, prefectural and municipal governments for INSET is not clear, and INSET programmes are planned, implemented and evaluated at different levels in different ways. Programme duplication is common. Many people recognize the vital role of the education centres administered by prefectural and municipal governments; however, trainees (teachers) have criticized INSET programmes for not necessarily being responsive to their needs.

Future Plans

The National Council on Educational Reform, an advisory council to the Prime Minister, made public its second report in April, 1986. It offered advice on the basic direction of education as the twenty-first century approaches.

Republic of Korea

Issues

A nation-wide survey of 3,700 primary and secondary school teachers was conducted in 1983 by the Korean Federation of Educational Association regarding whether teaching should attain a higher level of professionalism. A higher percentage of replies suggested 'long-term education and training,; 'more rigorous standard of qualification' and 'extension of autonomy and responsibility.'

As to how well teacher education institutions carry out their functions, the survey revealed the need for an evaluation of pre-service education, an evaluation of in-service education, and improvements to the teacher education system.

Evaluation of pre-service education. Greater efforts based on an evaluation of the management of teacher education institutes (1982) were made. These efforts were to:

- research and develop curricula and teaching and learning methods;
- inculcate a sense of duty and morality into teacher trainees by reestablishing the goals of teacher education; and
- enhance teacher quality and competence to effectively portray 'the Well-educated Man' concept.

Evaluation of in-service education. Simultaneously, the outcome of in-service teacher education was evaluated by the Board of Evaluation commissioned by MOE. An evaluation exercise on the outcome of in-service education for administrative and professional staff in the NIERT was performed by the Board under the supervision of the Ministry of Government Administration. The results of performance analysis of in-service education were summed up as follows.

- The budget allocated for 1985 was effectively used for the development of participation-oriented instruction.

- According to the evaluation report, facilities and equipment were used for and oriented towards adult education and participation-oriented instruction.
- As the results of in-service education survey reports were printed and distributed, they promoted the dissemination effects of in-service education. These reports will contribute to improving the content of in-service education programmes through continuous examination and feedback.
- Programmes for trainers' education, and seminars and workshops held for them in 1985, were of great help in enhancing participants' abilities and competency.
- During the last two or three years, the content of revised curricula and the diversification of trainers education have contributed much to the qualitative improvement of in-service education programmes. As a result, most of the programmes were reorganized in line with the direction in which trainers wanted to be trained.

It was also pointed out that uninterrupted efforts should be made to reinforce studies on trainers education, readjust the scope of lecture-discussion suited to participation-oriented instruction, and obtain qualitative improvement.

Needs

Improved direction of teacher certification. Research undertaken by KEDI in 1983 considered effective management and operation of the teacher certification system as the key to success in teacher education and proposed the following improvements to the teacher certification system.

- Teacher education institutions and education programmes should be reconsolidated and reorganized so as to upgrade the quality of teachers in terms of both theoretical knowledge and practical skills. The quality of teacher education programmes should be intensive as well as comprehensive so as to enhance teachers' professional competence.
- Throughout the entire stages of teacher education courses, from the selection of student teachers up to their graduation, the operation of a more reasonable and systematic evaluation mechanism is needed. The quality of student teachers must be continuously evaluated on the basis of both their professional competence and their whole personality.
- The current classification of teacher certificates by school level should be transformed into three categories concerning the basis of child development and educational development trends, such as the degree of children's physical and mental growth, the universalization of pre-school education, and primary and/or middle school. The three categories are the teacher certificate of lower grade level, middle grade level and upper grade level. And if needed, the teacher certificate of secondary school level, as now, can be allowed to concurrently exist.
- In connection with the revision of the teacher certification system by school level, the teaching subjects for the teacher certificate may need to be changed. Teaching subjects for the teacher certificate of lower grade levels may not be specified, as all subjects of the curriculum can be taught by one teacher. Two

(one major and one minor) or three subjects which they are qualified to teach may be entered.

Improvement of teacher education system. In 1986, a Ministry's research committee was assigned to undertake a study which will contribute to creating a link between teacher education programmes and teacher employment systems. Major items of the study include:

- recruitment methods (involving special recruitment, such as appointment by recommendation of superintendents);
- selection method (screening criteria based on personality and aptitude);
- exempting students of national teachers colleges and/or colleges of education from tuition fees;
- propriety of compulsory service in the teaching profession after graduation;
- improving measures for the effective management not only of curriculum and educational affairs but also of the character and scholastic achievement of students;
- graduation and certification system, certification and employment system; and
- internship programmes.

Improvement of Institute-based In-service Education

In-service teacher education was conspicuously intensified in accordance with the Revision of Ordinance for In-service Teacher Education in 1983. At present, various forms of in-service education are carried out by such educational institutions as national teachers' colleges, national colleges of education, and educational research institutes within municipal and provincial Boards of Education throughout the country.

The most conspicuous change in in-service education in the Republic of Korea during the past three years is the development of training programmes for educational staffs (including educational administrators, principals, senior supervisors and other professionals) by the National Institute of Educational Research and Training (NIERT).

As the NIERT was reorganized and given a special function to retain educational administrators and various educational professionals, its staff development programme has thus been intensified. The following delineation represents changes in the programme for the educational staff.

- The traditional teaching method (i.e. Lecture-dominated instruction) is transformed into participation-oriented training programmes.
- The participation-oriented training programme consists of a seminar, workshop, small group discussion, discussion-centred training with field visits, independent study, discussion with decision makers in charge of development and implementation of educational policies and plans, simulation games for setting up future-oriented educational plans, and field study.
- A synthetic evaluation programme is adopted to assess the programme outcomes. This includes evaluation relating to achievements made by trainees, self-study programmes attained by trainees, and follow-up monitoring. All aspects of the programme contribute to the development of a trainee's quality and attitudes.

Future Plans

With a view to inducing highly competent and talented teacher applicants, better induction plans and practices need to be developed for: i) inducing perspective teachers into the teaching profession, and ii) developing an induction system for educational personnel, including teacher educators, administrators and other educational personnel. Future plans also call for development of a network of training institutions to develop the competency, skills and values required of educational personnel.

Malaysia

Malaysia has a two-tier system of teacher education, with the Ministry of Education being responsible for the training of teachers for primary and lower secondary schools through its 28 teachers' colleges and the faculties/centres of education in five local universities being responsible for the training of teachers for upper secondary schools.

The survey revealed a concerted and systematic attempt by both the Ministry of Education and the universities to review the structure and curriculum of training in teacher education programmes in consonance with the changing needs of schools. There was evidence of greater sensitivity and responsiveness not only to national concerns and aspirations but also to specific regional requirements in the development of these programmes.

Issues

At the primary and lower secondary level, the structure of the teacher education programme underwent frequent changes between 1981 and 1986. The three-year, pre-service teacher education programme introduced in 1981 was slightly modified to accommodate a semester system in 1985 and again reduced to two and a half years in 1986 to help meet an increasing demand for teachers. This demand was caused partially by the improvement of the class/teacher ratio in primary schools and the reintroduction of part-time training of attachment (temporary) teachers' colleges from 5,000/6,000 to an unprecedented 10,000/11,000 beginning in 1985. Positive measures were introduced to attract more men into the profession.

An attempt to balance the rapid quantitative expansion of teacher education with the maintenance of a high level of professional competency among teachers saw the injection of various 'qualitative improvements' into the teacher education curriculum. Pedagogical changes in response to the New Primary School Curriculum (NPSC) led to renewed emphasis on such strategies and concepts as 'integration,' 'assimilation,' 'enrichment' and 'remediation'. New subjects, such as Citizenship Education and Islamic Civilization, were introduced to promote greater awareness among student teachers regarding national norms and objectives, and to help reduce communal and geographical polarization.

At the upper secondary level, faculties of education in the local universities developed 'concurrent,' 'consecutive' and 'off-campus' teacher education programmes to help meet shortages of, first, mathematics and science teachers, and, more recently, teachers in the languages and humanities. These changes, however, came about during a period of contracting resource allocation in the public sector, which led to implementation constraints and grave limitations in effectiveness.

Needs

The most frequently highlighted cluster of needs revealed by the survey was the development of strategies to cope with the scarcity of financial and human resources and

physical facilities which generally impeded the implementation of most programmes. In 1986, the increase in financial allocation for primary and lower secondary teacher education was only ten per cent over that of the previous year, compared with an increase in student intake of almost 80 per cent. Financial constraints have somewhat curtailed a corresponding increase in posts for supporting or auxiliary staff. Reduced financial allocation has considerably delayed the construction of five new teachers' colleges leading to congestion in existing ones. Limited funds have also affected the proper supervision of students during off-campus teaching practice, both at teachers' colleges and universities.

At the same time, there was an increasing awareness of the need to improve both pre-service and in-service teacher education in terms of planning and organization as well as content and methodology. More stringent student selection procedures were advocated. There was a move towards decentralization in college organization and administration, curriculum planning, and evaluation procedures, in an attempt to foster greater sensitivity to local needs.

There was increasing concern about the competence of teacher educators who were largely recruited from the ranks of secondary school teachers but who were increasingly assigned to train potential teachers at the primary level. Future teacher educators would need to have teaching experience at the primary school level so that they could acquire the necessary skills to train teachers at that level more effectively.

In the field of in-service teacher education, there was a need for more systematic planning, implementation and evaluation of staff development programmes leading to a more positive effect of these programmes in changing teachers' behaviour and bringing about innovations in the classroom. This, in turn, would call for the intensification of on-the-job in-house training in teachers' colleges, the establishment of more effective teacher centres at the state and district levels, and the introduction of distance learning facilities.

Finally, it was felt that there should be closer and better co-ordination between the teachers' colleges and the universities in the planning and implementation of teacher education programmes, and especially in the field of research. Various collaborative research efforts have been attempted since the early 1980s and these could be intensified in the coming decade. At both levels of teacher education, there is a pressing need to diversify instructional strategies so as to make foundation and other essential courses more interesting, meaningful and effective.

Future Plans

The major issues and emerging needs highlighted by the teacher education survey pointed towards the consolidation of teacher education programmes in the coming decade with an emphasis on the following activities:

- research to build up reliable and applicable materials and data for effective changes in teaching and teacher education;
- maximizing the available resources for teacher education, with greater sharing of personnel and physical facilities, and a gradual move towards privatization of some services in teachers' colleges;
- intensification of innovative approaches to pre-service and in-service teacher education especially in the field of in-house and distance learning facilities;
- streamlining of the curriculum, with an increased bias towards effective practical exposure for student teachers and a renewed emphasis on attitudinal change and 'integrative' experiences;

- greater decentralization in the planning and implementation of teacher education programmes at the certificate, diploma and degree levels; and
- systematic evaluation of teacher education programmes, with special emphasis on the effectiveness of teachers in the classroom.

Republic of the Maldives

Issues

Teacher education is one of the principal activities for achieving universal primary education by 1995 in the Maldives. Teacher training began in 1977 when government schools in Male were almost entirely staffed by expatriates and almost all of the schools in the atolls were staffed by untrained teachers. This is the first time a systematic and detailed survey has been undertaken.

The main issues identified in this survey are: expansion of pre-service training, expansion of in-service training staff development, physical upgrading of teacher education facilities, and evaluation of teacher education programmes.

Needs

Development needs identified at the national level include improving the living standards of the population, balancing population density and economic and social progress between Male and the atolls, and attaining greater self-reliance for future growth. The Maldives hopes to achieve these three objectives by the end of the century. All of the objectives are important and interdependent, thus all receive the highest priority.

More specifically, it may be important to view teacher education needs in the context of teacher requirements. Considering the fact that in 1980 only 43 teachers (4.3 per cent) in the atolls were trained, the urgent supply of trained teachers, in general, is a key element in integrating the traditional system into a modernized one. By 1985, 287 primary teachers were trained for the atolls and there were 769 untrained teachers. Most of the untrained teachers work part-time only. By 1990, at least 1,287 trained primary teachers will be required for the atolls and by 1995 at least 1,481 teachers. The present annual output of 40 to 50 teachers must be almost doubled to achieve these targets.

The situation in the capital of Male is different. In 1985, there were 138 expatriate primary teachers in Male. The number of primary teachers required by 1990 is 248; by 1992, 286 primary teachers will be needed to replace the expatriates. These figures are based on an average pupil/teacher ratio of 30:1.

The present training capacity for primary teachers in Male is 20 to 25 annually. This implies that the target of 286 trained primary teachers for Male falls short by 86 teachers. The need for rapid expansion of pre-service teacher training programmes is imperative.

Coupled with this is the issue of staff development. The one and only teacher education institute in the country intends to maintain the full-time staff/trainee ratio at 1:16. Seven new people are to be trained between 1986 and 1988 to join the present staff of nine teacher educators.

Rapid expansion in both pre-service and in-service training, together with staff development, should accompany the physical progress of teacher education facilities. This

implies an increase in the number of classrooms with better learning facilities, an increase in staff accommodation and an expansion of library resources and equipment.

The physical shift from being a teacher training section within the Educational Development Centre to a full-fledged Institute for Teacher Education (ITE) in its eighth year of teacher training history was a worthwhile development. By now, the structure of the courses offered, the subjects taught and the methods of evaluation have undergone considerable change. The opportunity for teacher trainees to engage in a school experience programme during the first year of training is also an innovative outcome which has proved essential and useful.

Future Plans

To meet the requirements for providing UPE, it is imperative that present teacher education programmes assume different forms. It seems logical for the ITE to look beyond Male and consider reaching out to the atolls in the conduct of both its in-service and pre-service courses, and to formalize the 'outreach' by establishing one or more outposts of the Institute in other islands. These outposts can be used for accommodating some student places for the pre-service course; later they can be used as in-service centres or 'teacher centres.'

The introduction of distance education to raise the standard of entry requirements of teacher training courses is seen as a favourable alternative. These programmes can be launched through the Atoll Education Centres (AEC), under the guidance of a headmaster. One AEC now exists in each of the 19 atolls. If such a measure proves fruitful, the training courses could be reduced to one year, as was the case during the initial four years beginning in 1977. This would double the annual number of graduates.

Presently, only primary teacher training is undertaken in the Maldives. It is now time to start middle school teacher training for the middle schools being established in many of the atolls.

Overall in-service programmes are to be planned to overcome the ad hoc manner in which such training is currently presented.

A programme of staff development to train more teacher educators and upgrade present staff will continue in the future.

Measures also are being taken to improve physical facilities. Improvements in classroom environments in terms of thermal, acoustic and visual characteristics have been considered.

The need to change from more information to scientific evaluation practices of teacher education programmes is essential; however, no specific plans have as yet been identified.

Nepal

Issues

Teacher training in Nepal has been going on without any full-scale assessment of the quantitative and qualitative needs. There is no mechanism to obtain reliable baseline data on which to plan teacher education programmes. The present system has been quite inadequate in meeting the primary needs of the school (i.e. training of teachers in teaching the various subjects).

Using the teacher education budget/total education budget ratio as an indicator, the trend is towards a decreasing proportion of allotment to teacher education programmes. Additionally, the growth rate in resource allocation to the education sector as a whole compares favourably to the growth rate of the same in teacher education. Thus, expenditure on teacher education has not been tuned to the same growth rate as that of the education sector as a whole.

Some of the national resources have been spent on innovative projects, including the Education or Rural Development Project in the Seti Zone and the Primary Education Project, which is now being launched in six districts. These projects have developed new structures of training teachers while on the job and strike an innovative departure from traditional campus-based teacher education programmes. Teacher education campuses can learn much from these projects, but there has been little confluence between old and new structures of teacher education.

The manpower capacity of teacher education is generally adequate, although in some areas there is a critical shortage, rendered more so with the deputation of qualified teachers educators elsewhere. There has been a very unfair distribution of able teachers among the several campuses of teacher education, the outlying campuses being generally served by less qualified and more inexperienced personnel and the Kathmandu campuses being overstaffed with the comparatively better personnel. Although quite a large proportion of existing teacher educators are underqualified or untrained in the formal sense, informal occasions (seminars, workshops and mobile workshops) have compensated for the inadequacy through exposure of the underqualified/untrained backlog to various issues emerging in the education sector. Yet, should the teacher education programmes be expanded or improved intensively, an increased number of teacher educators would be needed.

The production capacity of teacher education, in terms of trained school teachers, has been low because there are fewer entrants for the pre-service courses. Limited government resources to support the training programmes also has affected in-service programme enrolments. With further expansion of the schooling system and at the current rate of teacher production, it is doubtful whether the country will be able to maintain the current ratio of trained teachers at school levels. Universal primary education by the year 2000 remains the target in the education sector, implying a tremendous task for teacher education to undertake. As matters stand, teacher education may not be able to meet the teacher requirement by that time.

Needs

Rigorous research on teacher education performance remains to be conducted. A sociological or ethnographical type of research on teacher education is required. The highly useful insights gained from the experimentation of externally-assisted innovative projects on teacher education (the Seti Project and the Primary Education Project) have to be utilized profitably in revamping institutionalized programmes of teacher education.

New Zealand

Background

During the 1970s, three-year training for primary teaching was introduced and kindergarten training programmes were transferred to primary teachers colleges. During the same period, colleges established relationships with local universities, leading to either combined B.Ed. programmes or crediting arrangements within other degree structures.

By 1978, the number of teachers college graduates exceeded the demand for teachers, and college enrolments declined to half their previous total by 1982. As a result, one college closed and a number of shared-site arrangements were developed with technical institutes. Teacher college staff who resigned or retired during the period were not replaced.

A change in government occurred in 1984 accompanied by a new commitment to improve the staffing of kindergartens and schools. Increased intake into college programmes has resulted and, to ensure a supply of college staff with recent and relevant educational experience, a policy of contract appointments was introduced. Other improvements include the introduction of a policy for all teachers entering secondary service to be both subject qualified and teacher trained.

New provisions were also introduced establishing a professional qualification structure for teachers as an alternative to a university degree but offering the same salary credit.

Issues

Provision. New Zealanders recognize that the community is increasing in diversity and there is concern that the teaching force is not a representative mix. Apart from the shortage of secondary teachers in mathematics and science, and to a lesser extent in commercial and technical subjects, there are also shortages of Maori and Pacific island teachers and women, particularly in senior administrative positions.

Initial preparation. The quality of training that can be achieved in a one-year programme for secondary teachers is of concern. The two-year kindergarten and one-year child-care programmes are also regarded as inadequate, and consideration is being given to providing an integrated early childhood programme of three years. The differential qualification structure resulting from local university/teachers college arrangements is also an issue.

Career development. All schools with beginning teachers receive 0.2 of a staff position to support an induction programme in the first year of the two-year induction period. A more consistent approach to the development of first-year induction programmes is desirable. Better linkage could be developed also among pre-service, induction, in-service and continuing education programmes.

Teacher education personnel. The impact of the 20-per-cent college staff contract arrangement requires assessment. A more appropriate mix of college staff is desirable, particularly in regard to women, Maoris and Pacific islanders.

Support services. Improvements in financial and health and welfare services for teacher trainees are being sought. Increased support for the mandatory multicultural programmes in teachers colleges, particularly ancillary staff, is also an issue.

Needs :

The following have been identified as areas of high priority in teacher education:

- more effective means of recruiting women, Maoris and Pacific islanders into both teaching and teachers college positions;
- developing teacher understanding of the needs of those handicapped students being 'mainstreamed' into the education system;
- improving secondary training in relation to the transition from school to work; assessment in the upper secondary school;

- assisting teachers to develop new ways of supporting community involvement in the work of schools;
- developing teacher training with regard to health education initiatives;
- promoting teacher effectiveness training as an alternative to corporal punishment;
- supporting trade union education;
- promoting safety in the outdoors; and
- strengthening current programmes in the education and training of those working in early childhood programmes.

Future Plans

The education system will be strongly influenced by a number of current or proposed reports and reviews. A parliamentary select committee will report on an inquiry into the quality of teaching, and recommendations of reports pertaining to curriculum and assessment policies are being considered. A royal commission on social policy will also be associated with a review of tertiary education, including teachers colleges.

Pakistan

National education policy. With the introduction of the National Education Policy of 1979, the education system in Pakistan is geared to the national needs and the economic development strategy of the country. It has emphasized that the education system is the most reliable means of social transformation. Commitments to universalization of education, democratization of the education system, vocationalization of education, and emphasis on the production of trained manpower have become the major thrusts of the education system as a whole.

Teacher education. In the field of teacher education, the National Education Policy has firmly accepted the crucial role of teachers in the successful implementation of the education system. It has been recognized that the teacher is the pivot of the entire educational system. To promote pre-service teacher education, all primary teacher training institutions and normal schools are being upgraded to colleges of elementary education. An academy of higher education has been established to provide pre-service and in-service training to college and university teachers. An academy of educational planning and management has been established to provide training opportunities to administrators and supervisors working at different levels of the education system.

It has been envisaged that every teacher will have to undergo one in-service course during five years of service. A system of national awards for best teachers will be instituted. Every year ten teachers of various levels and categories will be given these awards by the president of Pakistan at the national level. Similar awards will also be given to selected teachers by the respective provincial governors.

Budget allocation. Allocation of funds for teacher education in the Sixth Plan period (1983-1988) is as follows.

	<i>Recurring Expenditure (in million rupees)</i>	<i>Developmental Expenditure (in million Pees)</i>
1983-1984	12	16
1984-1985	14	20
1985-1986	18	27
1986-1987	20	32
1987-1988	24	38
TOTAL	88	133

Entry qualifications. Requisite entry qualifications into the teaching profession at different levels are as follows:

- Primary Level (I-V): Matriculation + one-year teaching certificate (PTC);
- Middle Level (VI-VIII): Intermediate + one-year teaching certificate (CT); and
- Secondary Level (-X): B.A. or B.Sc. + one-year B.Ed. degree.

Critical deficiencies. Critical deficiencies in teacher education are as follows:

- short duration of teacher training programmes;
- shortage of audio-visual aids and other educational equipment in teacher training institutions;
- unavailability of standard textbooks;
- deficiencies of supplementary reading materials, guidebooks and journals;
- lack of co-ordination among training institutions;
- outmoded methods of teaching and evaluation; and
- absence of incentives for prospective teachers.

Allama Iqbal Open University. Allama Iqbal Open University offers teacher training courses through a non-formal system of education. These programmes will provide trained teachers for the rapidly increasing number of schools. The Open University has developed useful training material and launched field experiments which have produced very beneficial results.

Philippines

Background

Teacher education in the Philippines had its beginnings as early as the Spanish period. Teacher education programmes have always been dictated by the urgent needs of the time. Before 1950, there were only a few state colleges offering a teacher education programme. However, when the Department of Education reported the gravity of the problem of under-supply of professionally qualified teachers, enrolment in teacher education registered an upward trend. To encourage more schools to offer teacher education courses, requirements for

opening normal schools and colleges were relaxed. As a result, teacher colleges mushroomed, resulting also in a relaxation of the standards. To control and improve private teacher education institutions, various measures have been adopted by the government since 1950. Among the significant measures were:

- extending the elementary teaching course from a two-year course to a four-year course in 1950;
- a ban on opening new teacher training courses in 1954;
- setting a higher cutoff point in the national college entrance examination ratings for admission to the teacher education programme starting with the school year 1980-1981;
- professionalization of teaching through the professional board examinations for teachers in 1980; and
- promulgation of 'Policies and Standards for Teacher Education' in 1983.

Issues

Provision. The recruitment and admission of quality students into the teacher education programme is a critical concern in teacher education. This concern is linked with the low status and prospects of the teaching profession and the comparatively poor economic rewards for teachers.

Funding. The present economic crisis confronting Philippine society has affected the financial viability of teacher education institutions, particularly private schools whose main source of income is student tuition fees. Of the 328 teacher education institutions, around 85 per cent are private institutions; the remainder are state schools.

Continuing education of in-service teachers and teacher educators. Provision for reorientation and continuing education of teachers in the field, as well as teacher education, is urgent if educational changes in the programmes of elementary and secondary education are to be effectively implemented. A few instances in the history of the Philippines educational system show that educational reforms and innovations failed because implementors were not properly oriented and prepared.

Research in teacher education. Considering how important research is for obtaining objective data which can be used as a basis for sound decision making, the dearth of research data in teacher education becomes more significant.

Needs

The following needs have been identified:

- alternative models to improve the quality and quantity of students in the teacher education programme;
- extension of government support to help teacher education institutions become more financially viable;
- alternative programmes for in-service/continuing education to upgrade the competency of teachers in the field and teacher educators; and
- a mechanism that can be adopted to assure continuing research in teacher education, which can be the basis for relevant changes in teacher education.

Future Plans

Drastic changes have been taking place in the political, social, economic and cultural milieu in which the Philippines' educational system operates. However, a heartening trend of late is the initiative being taken by the government, particularly the Ministry of Education, Culture and Sports (MECS), to tackle the issues confronting Philippine education. Initial focus of development plans for education is on the improvement of the status and salaries of the teaching profession. Ongoing reorientation education of teaching personnel will be continued for both public and private school teachers in centres established for this purpose. This granting of certain incentives and benefits to voluntarily-accredited teacher education institutions is expected to upgrade teacher education programmes. Evaluation and development of teacher education programmes will continue to be conducted on a collaborative basis with professional and non-governmental agencies.

Sri Lanka

Background

There is pre-service and in-service teacher education in Sri Lanka. In-service is implemented by four universities, 16 teacher colleges and units in the Ministry of Education, such as CDTE, CDC, Distance and HIEE. Pre-service (institutional) is a recent development and is handled by the six colleges of education. A pre-service induction programme is conducted by the pre-service unit of the Ministry of Education. The annual expenditure on education in Sri Lanka for 1986 was Rs. 4,117,756,000 Of this, about one-tenth was spent on teacher education.

Issues

- a shortage of teachers in specific areas (primary, technical and aesthetic);
- a backlog of untrained teachers (primary and secondary), 20,000 non-graduates and 10,000 graduate teachers;
- quality improvement in some teacher education programmes (distance, school in-service, in-service institutional) via staff development, curriculum revisions, better resource allocation and evaluation of teacher education programmes;
- better co-ordination and linkage among programmes, within and among ministries, units and institutions; and
- more research in teacher education.

Needs

- More teachers are required for primary school and special areas, such as technical and aesthetic education.
- The institutional in-service programme, school in-service programme, distance teacher education programme and pre-service induction programme need curriculum revisions to suit the changed school curriculum and to keep pace with the newly developed teacher education curriculum. Some of the new areas introduced to the newly developed and revised curriculum are lifelong

1. Approximately 29 Sri Lanka rupees (Rs.) equals one US dollar.

education, education technology, research, population education, computer education, community education and education sociology.

- The survey has revealed that some of the planners of teacher education programmes require further knowledge and greater experience in programme design and evaluation.
- There is a shortfall of trained personnel among teacher educators in the areas of testing, evaluation and research. There is a need for trained and qualified personnel in the field of school in-service programmes.
- Research is introduced as a subject in some of the newly developed teacher education programmes. It should be introduced into other teacher education programmes also. Staff development in research is also needed. A separate unit is needed to undertake research in teacher education.
- There is a need for special teacher education programmes for special areas, such as Plantation and Mahaweli.
- There is a demand for computer education and modern technology from all teacher education programmes.
- Curricular activity in teacher education is a compulsory subject in the recently developed pre-service teacher education programme. Other teacher education programmes also should stress this subject.
- Teachers and teacher educators need further training in evaluation techniques and procedures of continuous assessment and personality assessment.
- Community development via Teacher Education University teacher education programmes, pre-service programmes and CDC staff development programmes for graduate teachers has introduced community education; this should be extended to other teacher education programmes.
- For quality improvement, more resources and resource centres are needed.

Future Plans

The Ministry of Education has plans to:

- provide facilities and opportunities for staff development of teacher educators and teacher education planners;
- organize a research unit in teacher education;
- develop special teacher education programmes (Mahaweli and Plantation);
- introduce community education to all teacher education programmes;
- provide more teacher educator training in teacher education evaluation methods;
- provide more facilities to teacher education programmes;
- revise some teacher education curricula; and
- extend pre-service teacher education.

Thailand

Issues

Pre-service. Thailand has many teacher education institutions; the majority of them have their own administrative bodies and function independently under their own individual charters. Selective universities and open universities which train teachers have their own charters and work under the Ministry of University Affairs, while teachers' colleges, vocational and technical colleges, physical education colleges and drama colleges also train teachers and are controlled by the Ministry of Education. There is no systematic or authorized co-ordinating structure for bringing together these institutions to work towards mapping out a concise plan for the country. Teacher education institutions, therefore, produce a surplus of teachers, and unemployment among teacher education graduates is becoming more and more critical.

In qualitative aspects, teachers are being criticized for being inadequately prepared. Criticism extends from the first stage, teacher student recruitment, to the final stage of preparation, teaching practice. Recruitment measures employed by teacher education institutions are ineffective; they are based mainly on entrance examination results, while interest and aptitude in the teaching profession receive less attention. Curricula for teacher training do not correspond to primary and secondary school curricula. For the most part, teaching practice emphasizes theory and is lecture-oriented rather than practice-oriented.

In-service and staff development. The present system of in-service training has two purposes: upgrading and updating. For upgrading, teachers go to evening classes offered by teacher colleges or take courses offered by open universities to obtain degrees or diplomas. The programmes are criticized for their irrelevance to the work of teachers in schools. For updating, the programmes are conducted when needs are felt by the administrators. Teachers themselves have a minimal role in this respect. Frequently teachers attend training programmes they have attended previously; sometimes the timing is inappropriate, compelling teachers to leave their classes to attend the programmes.

Teacher induction. Beginning teachers receive little assistance at the start of their jobs. Mostly, one-shot orientation programmes are organized for a few days by employer institutions. Programme content is superficial, touching on curriculum structure, subjects to be taught, and teachers' codes of conduct.

Needs

Pre-service. There is a need for restructuring the administrative system of teacher education institutions so that resources can be shared in developing teacher education programmes to meet the needs of the country in general and the local community in particular.

Student recruitment measures, curriculum, and teaching practice need to be revised to improve the quality of teacher education.

In-service and Staff Development

Evening programmes for current teachers should be modified to be more relevant to a teacher's work in school. At present, the same curricula and course syllabi are being used for training both future and current teachers.

Teachers themselves should take a more active role in developing staff development programmes. As possible, teachers should be allowed to assume initiating roles in organizing programmes to suit their own needs.

With regard to teacher induction, since new teachers are taken from among college graduates in teacher education and other graduates, teacher induction should be developed in different ways to suit the different groups of clientele.

Future Plans

Pre-service. To reach a desired restructure of the administrative system is definitely time-consuming. In the first stage, the present scheme of teachers' college consortium and networking with the other higher educational institutions will be encouraged and strengthened. By means of consortium and networking, resources (financial, manpower, facilities, expertise) will be fully shared.

Secondly, present college and university charters or acts concerning teacher education will be thoroughly investigated and amended. In fact, a new education reform act is being proposed having only one ministry of education. Under the new law, all educational institutions will be put under one umbrella, the Education Ministry. There will be three main bureaus within this Ministry: the Bureau of General Education, responsible for pre-school, primary and secondary education; the Bureau of Higher Learning, responsible for all kinds of education higher than secondary level; and the Bureau of Religions and Culture.

Improvement of teacher education quality. There has been a pilot study on the recruitment of teacher students by means of selection and examination. Results reveal that, for scholastic achievement, both groups of students are similar in performance. But as regards attitude towards the teaching profession, those students who entered college by the selection basis received better scores. Therefore, in the future, recruitment of students by means of selection will be applied widely among the teacher education institutions. In addition to applying recruitment, the idea of student residence will also be applied. Students are required to live on campus for at least one academic year.

Teacher education curricula are in the process of revision, and teaching practice will be arranged as a continuous process starting with the first year of enrolment to the fourth year of the programme.

In-service and staff development. Since the school cluster concept has been effective in providing education for children, in-service teacher education based on the cluster system is to be tried.

School-based in-service is successful in some countries and should be introduced as a pilot study in Thailand.

Teacher induction. Two categories of graduates are recruited as new teachers: graduates of teacher education programmes and graduates of programmes other than teacher education. Induction programmes could be arranged to meet the needs of each group. For the teacher graduates, a few days of orientation, plus working under the supervision of experienced teachers for a certain period, should be sufficient. New teachers from the latter category will become good teachers if they get a good start. Workshops should be conducted for them. The following activities are recommended: teaching observation, curriculum analysis, micro teaching, and study visits to good schools. When they are sent to schools, they should work under the supervision of experienced teachers.

Professional teaching certification. A new law has been drafted and submitted to the parliament. Under this law, better qualified people will be recruited into the teaching profession, and those who are already in the teaching force will be required to upgrade their skills.

Viet Nam

Because of the disruption that occurred in Viet Nam during the 1960s and 1970s, due to the country being in a state of war, there was little change or development in the system of teacher education during that period. As a result, the features of the system of teacher education in Viet Nam reported upon in the 1972 Unesco publication *Teacher Education in Asia: A Regional Survey* are much the same as those which now exist. In addition, much of the effort that has occurred in recent years has centred on replacing and rebuilding a school system that was substantially damaged by the ravages of war.

The main changes that have occurred are largely in response to the enormous expansion in the school system that has been the feature of education in Viet Nam over the past decade. Efforts have been made to achieve both universalization of primary education throughout the whole country (in both rural and urban areas) and equality of access to schooling for all groups in the community, regardless of gender, ethnic background, regional location or socioeconomic status.

With this expansion in the availability of places in schools has come a substantial increase in the demand for teachers. This has placed considerable stress upon teacher training institutions to provide the necessary teachers; consequently, there has been an expansion in the number of places available in existing teachers colleges and also in the opening of some new teacher education establishments.

In addition to an expansion in pre-service teacher education numbers, there has been a growing realization that the development of teachers, once they are actually working in the school and classroom, is also important. As a result, in-service education has become much more widespread, with many experienced teachers attending in-service courses either after normal school hours or during vacation periods. This is aimed at improving the quality of teaching that occurs in schools.

Western Samoa

Background

Teacher education in Western Samoa began with the arrival of missionaries during the last century (1830-1900). They attempted to teach the Samoans to read and write in the Samoan language. Samoans were trained to teach accordingly.

The German administration (1900-1914) brought no significant changes, as government participation was restricted to a school for German children.

The New Zealand administration (1914-1962) introduced the concept that education is a state responsibility and duty, and that the most democratic way of handling this was to make it secular. By 1920, the New Zealand administration had already taken over the pastor schools; it was not until much later, under a team led by Dr. Beeby, that any major changes for Western Samoa reached the planning stage.

With independence and statehood in 1962, some exploration began into the Samoanization of the education system, as divorced from introduced models, with the realization of a culturally Samoan-oriented type, appropriate to local needs. In this respect, Unesco assisted by sending various survey missions, followed by curricula construction teams on various subject areas, such as environmental and language studies. It was then that curriculum innovation began to be appreciated within the society.

Issues

- There is a wide gap between policy decision making and the implementation level.
- Major curricula innovations are necessary to upgrade and update the educational system and reconcile it with modern changes if the country is to keep up with modern educational developments and simultaneously enable the population to retain its cultural heritage and national identity within the forum of Pacific and Asiatic nations, as well as within the family of all nations.

Needs

- The first and foremost need of national importance is legislation for compulsory primary education.
- Policy and practice regarding quality improvement and an increase in the quantity of teaching personnel are urgently needed.
- The management structure of primary education is inadequately organized to guide teacher education institutes in accordance with the national development strategy. Rigidity and inefficiency in the schooling process result from the absence of effective, central and complete planning.
- Annual pre-service teacher trainee intake is not always the best.
- There is an obvious need for staff regrading.
- There is an emerging need, if not an urgent one, to recruit staff with substantial background in educational studies for teachers colleges.
- Teacher education staff must be actively involved in the work of the Curriculum Development Unit (CDU) so that curriculum changes and new methodology can be incorporated within their own teaching programmes. Involvement, however, should be outside lecturing hours.

Future Plans

- The first Samoan school certificate examination is to be introduced in 1989.
- By 1990, all Samoan students will sit for the Samoan school certificate.
- In 1988, two teacher education institutions were scheduled for amalgamation.
- The Form II examination was scheduled to be abolished in 1988.
- CDU and examination personnel will co-ordinate assessment practices.
- Difficulties in implementing the present policy of teaching all subjects in English should be recognized.
- A new policy should be drawn up regarding the medium of instruction.

Developments and Reforms in Teacher Education²

Many initiatives and innovations in teacher education identified in the various national studies are part of the general reform movement in education.

Reform refers to planned change brought into widespread use for the improvement of teacher education. Teacher education reforms contained in this summary were drawn from the survey on teacher education conducted in Member Countries which participate in the Asia and Pacific Programme of Educational Innovation for Development (APEID), the findings of which are presented in the case studies in volume two of this report, as well as in the preceding national review briefs.

It is noted that the survey questionnaire did not ask for reforms per se, but rather solicited descriptions of innovations and developments in teacher education. Since the survey was undertaken in 1985-1986, it is assumed that many of those innovations and developments have been implemented within the systems of teacher education in the countries concerned, and have become reforms.

These developments and reforms in teacher education will be summarized and discussed in terms of the following major themes: pre-service education, teacher recruitment, teacher induction, in-service teacher education, policy and structural changes within teacher education, system linkage of teacher education institutions, and research on teacher education.

Pre-service Teacher Education

Most countries in the region recognize the crucial importance of pre-service education of teachers. In many countries, it is realized that the education system can only be as good as its teachers. For instance, the 1986 National Policy on Education in India states that 'no people can rise above the level of its teachers.'

In any attempt to improve teacher training, major attention must be given to pre-service education. Major developments in this area include the following.

School-based teacher education. In a few countries, one of the leading reforms in pre-service education is the attempt to make it school-based. Whereas most pre-service teacher training was previously undertaken only in colleges of education in universities and in teacher training colleges, prospective teachers are now exposed to the realities of teaching in schools. For example, in the Maldives, students at the Institute of Education return to their home island for a period of four weeks. During that time, prospective teachers examine their island school situation with a fresh outlook, using a research survey instrument to assist them. After their return to the Institute, the information and data gathered is used in relevant academic courses. Such experience also better enables students to translate theory into practice.

In the Philippines, observation and practice teaching are no longer undertaken only in the laboratory schools of the colleges of education of universities and teacher training colleges. They occur in the public schools, including those situated in slum areas and remote villages.

Practicum-based teacher education. Related to school-based teacher education is the practicum-based teacher education programme undertaken in one state university in the Philippines. The curriculum involves a structured programme in which the student teacher learns to be an effective teacher through actual involvement with pupils and the community,

2. Based on a paper prepared by Dr. Leonardo de la Cruz for the Unesco PROAP *Bulletin*, 1988.

while theory and practice are integrated at the earliest stage of the student's experiences. The student is assisted in becoming a successful beginning teacher through appropriate classroom and community apprenticeship activities.

In Thailand, prospective teachers in teacher training colleges are required to make use of the Centre for Clinical Applications and Practices, where they undertake their field work. Student teachers in the four-year programme at teachers' colleges gain a greater range of practical experience; they are also required to undertake their practicum twice—the first time in the second or third year of their programme (for six weeks), the second time in the fourth year (for sixteen weeks). After the first practicum, the students, practicum supervisors and members from the faculty of education discuss any problems that may have arisen and seek ways to solve the difficulties.

Ladder-type curriculum. In the Philippines, some teacher training colleges have attempted a ladder-type curriculum. This provides a sequence of courses so that a student who leaves school after the first or any other year, prior to completion of the four-year course, may be certified in the following ways: as a teacher aide after the first year; as a teacher assistant after the second year; as a teacher associate after the third year. A full degree is granted for successful completion of the fourth year.

Teacher training outpost. This is another form of school-based pre-service teacher education. In New Zealand, a general shortage of secondary teachers in the early 1980s led to the establishment of a number of secondary training outposts located in areas where there were significant numbers of suitably qualified candidates and teacher shortages. The outposts are under the control of (and closely associated with) the nearest teachers' college. These teacher training outposts rely heavily on senior teachers of participating schools for both tutorial support and teaching practice.

In some provinces in Pakistan, teacher training units have been added to the existing high schools, with selected teachers at the high schools used as teacher educators. X Through this arrangement, the supply of trained teachers has been improved.

In Sri Lanka, there has been difficulty meeting the demand for teachers in the plantation areas; consequently, it was decided to train teachers in the plantation districts concerned by drawing from the pool of young people on the plantation itself.

Teacher Recruitment

In many countries, there is a concern that too few of the better qualified young people are opting to enter the teaching profession. This has adversely affected the status of teachers. As a result, innovation and reforms, such as the following, have been undertaken to 'help remedy the situation.

Minimum academic standard. In some countries, a minimum academic standard has been set for entry into teacher training colleges. In Japan, for example, applicants to teacher training institutions are subjected to interview, tests of intellectual ability, and aptitude tests.

Scholarship. In China, community leaders in remote areas offer grants to promising young people to encourage them to study in teacher training colleges on the condition that, upon completion of their course, they return and teach in their local village.

In some countries, such as Malaysia and the Philippines, there are fewer and fewer male applicants to join the teacher profession; therefore, more scholarships are being offered to prospective male teachers. In other countries, however, the problem concerns training more young women to become teachers. Similarly, scholarships for prospective women teachers have

been made available. In countries such as Nepal and Pakistan, women teachers are an important determinant for the enrolment of girls in primary schools. In Nepal, a project on Equal Access of Women to Education (EAWE) has been launched. This project aims to train girls as primary school teachers. It is hoped that they, in turn, will teach in their village schools and so assist in promoting a more positive attitude towards the education of girls.

In New Zealand, in view of that country's cultural diversity, special efforts are being made to recruit into teaching a mix of candidates that reflects the ethnic and racial characteristics of the population. For instance, target quotas have been set for Maori and Pacific island candidates.

Teacher Induction

In many countries, plunging teachers into the classroom without a proper process of professional induction has been counterproductive. As a result, some countries have organized a systematic teacher induction process.

In Australia, the school principal is held responsible for the induction of the teacher during the first year of teaching while the teacher is on probation.

In other countries, such as Sri Lanka and Japan, intensive seminars are organized for new teachers. In Japan, research was undertaken at the Tsukuba University to develop an effective in-service programme for beginning teachers. In the Maldives, there is no systematic induction programme; however, beginning teachers do obtain helpful advice from fellow teachers and supervisors. Weekly staff meetings have also been found to be very useful.

In-service Teacher Education

In all countries in the region, it is emphasized that teacher education and development is a process that extends throughout the individual's career. Some of the main developments currently occurring in the area of in-service teacher education include the following.

Staff development. One major reform movement in in-service education is that undertaken with regard to a systematic staff development programme, rather than the adoption of an ad hoc, crisis-oriented in-service teacher training programme. For instance, Tasmania (Australia) has a programme called the Senior Staff Development Scheme, in which senior teachers are given a week at a time, three times a year, to undertake specifically designed courses in such areas as curriculum development, evaluation and administration.

In China, the competence of secondary school teachers has been upgraded by sending them to in-service training courses conducted at provincial pedagogical institutes. Priorities have been given to teachers who received little pre-service preparation, due largely to the occurrence of the Cultural Revolution.

In Pakistan, the national educational policy envisages that each teacher should receive in-service training at least once every five years throughout the individual's teaching career.

Distance education. In-service teacher training via distance education has become a major development in many countries in the region. Institutes of education in open universities have assumed pivotal roles in upgrading teachers skills. This is the case in many countries in the region, including China, Pakistan, Sri Lanka and South Pacific countries which are linked to the University of the South Pacific.

In many countries, new communication technologies are used in the distance education of teachers. For instance, in India and the South Pacific, satellite communications are used extensively. In other countries, such as Nepal and the Maldives, radio is extensively used for in-service training of teachers.

School-based in-service education. In many countries, the in-service education of teachers is school-based, Japan's in-service education for teachers (INSET) being a good example. An interesting feature of the Japanese INSET programme is that the teachers themselves plan and organize in-service education courses.

In Malaysia the school headmaster or headmistress assumes a professional leadership role in the in-service training of teachers; while in Sri Lanka, about 60 education officers and 1,000 master teachers are implementing that country's school-based in-service education programme.

Thailand recently instituted a community-based in-service teacher education which is available to teachers during the evening and on weekends, both on-campus and at extension centres of teacher training colleges.

Policy and Structural Changes in Teacher Education

In many countries of the region, a number of innovations, developments and changes have occurred which have implications for policy and structural changes in teacher education. These include the following.

Linkage to socio-economic reforms. China has recognized that, without effective teacher education, the successful realization of the country's aims to achieve modernization will not be possible. Teacher education is therefore regarded as being a strategic measure in the country's socio-economic and cultural reconstruction. Consequently, teacher education is given a high priority in terms of: distribution of finances, personnel and facilities; arrangements for capital construction; recruitment of teaching staff; and admission of high standard candidates.

Leave with pay. In New Zealand, to meet the demand for teachers and other educational personnel in specialized areas, teachers are granted leave with full salary if they undertake post-graduate training in teaching, as regards educating the handicapped, teacher librarianship, guidance counselling, and reading recovery.

Teacher certification. In Japan, more flexibility has been introduced into the teacher certification system, with a view to enabling it to better cope with the diversification of upper secondary school education and more effectively attract competent people into teaching positions, especially in areas of vocational and practical subjects.

In Malaysia, in view of the shortage of teachers in school subjects that require special talents (such as music), the appointment of itinerant teachers to serve a cluster of schools has become a widely accepted practice, particularly in the rural areas.

Professionalization of teaching. In the Philippines, attempts are being made to upgrade the teaching profession by raising its status to be on a par with other professions. One of the main ways to achieve this has been to resolve issues and problems pertaining to teacher education in consultation and/or collaboration with professional organizations and institutions. For instance, the curriculum on teacher education was framed by the Ministry for Education in collaboration with the Philippine Association of Teacher Education (PAFTE). PAFTE developed prototype syllabi for new courses in the new curricula, as well as locally authored textbooks for the courses. 'Policies and Standards for Teacher Education,' passed in 1983 as MECS Order No. 26 and revised as MECS Order No. 37 in 1986, was formulated through a

series of consultative conferences, particularly with PAFTE. With regard to general education and specialization components, the Association of Philippine Colleges of Arts and Sciences (APCAS) was consulted. Some research grants for teacher education also were extended to professional organizations by the Ministry, and joint conferences/assemblies between MECS and non-governmental agencies were conducted to discuss issues and problems in teacher education. In addition, the reorientation and retraining of private school teachers from elementary schools occurred as a joint project of MECS, the Fund for Assistance to Private Education (FAPE) and the PAFTE.

In New Zealand, 20 per cent of teachers' college positions are now short-term contracts to attract practicing teachers and other specialists from the teaching field. This procedure ensures that the content of teacher education courses is consistent with the practice in the education field by bridging the theory/practice gap. In addition, New Zealand has established a number of 'teaching outposts' where students are trained in ways which emphasize a school-based approach. Research supports the view that this provides effective initial teacher training in the one-year course for secondary teaching.

Structural Changes: Infrastructure for In-service Education

In many countries, new infrastructures for in-service teacher education has been established. For instance, in the Republic of Korea, the Korean National University of Education was set up in 1985 to both educate and reeducate teachers and assume a leading role in educational reform.

India recently instituted a District Institute of Education and Training (DIET), which is designed to improve and enrich the academic background of elementary school teachers, non-formal and adult education functionaries, and other personnel at the lowest level of the education system. This is one part of an attempt to decentralize professional preparation and extend excellence from urban to rural areas, and from the elite to the general population of teachers.

In terms of the organizational structure of teacher education, the requirement for community responsiveness has led, in a number of countries, to a move towards decentralization in college and university organization and administration, and in curriculum planning and evaluation procedures, in an attempt to foster a greater sensitivity to local needs. As an example, in Sri Lanka, special teacher education programmes have been implemented in particular areas, notably Mahaweli and Plantation.

On the other hand, in China, the administration and management of teacher education has been placed under the newly established Teacher Education Department, which is situated within the State Education Commission.

System Links and Cohesion and Ways of Organizing Teacher Education

Consistent with the view that the education of teachers should be a continuing process, a number of countries have sought to develop links between pre-service courses and in-service programmes. For instance, the 1986 National Policy on Education in India states that 'teacher education is a continuous process, and so its pre-service and in-service components are inseparable.'

Pre-service cum in-service education. The Maldives and the Philippines have initiated new modalities for the in-service education of teachers, whereby teacher educators who supervise pre-service teachers during teaching practice also provide in-service education to practicing teachers.

Flexibility in specialization. Rigidity in the specialization of teacher training has been a problem in a number of countries. As a result, there have been attempts to resolve the problem through the development of links between primary and secondary training. For example, Malaysia has included a 'primary education package' in the training of lower secondary school teachers to make them more flexible in terms of development in schools.

Cluster approach. The development of links between education institutions has been adopted as a way of maximizing available resources for teacher education. Malaysia has looked at the sharing of personnel and physical facilities between colleges; in Thailand, the 36 teacher education institutions have been grouped into eight clusters for the purpose of resource sharing. In addition, higher education institutions have been engaged in a system of sharing research, staff development and extension facilities. As a result, there is a more efficient use of teacher education resources in the country. Also, schools in Thailand have been clustered for the purpose of providing in-service training for teachers. This has resulted in programmes which are more relevant to the needs of teachers in the particular schools involved.

In the past, teacher training institutions, particularly those in universities, have been regarded as remote institutions that are not functionally linked to the schools. As a result, teacher training was very theoretical and hardly ever linked to practice. This absence of links between theory and practice has led to many difficulties. For example, schools in Japan were often reluctant to receive students for practice teaching sessions because the universities had not given adequate careful consideration to the personal qualities of students before they were sent into schools. To help rectify this undesirable situation in Japan, a network has been established between the university, the local government (Board of Education) and the schools.

Research in Teacher Education

Perhaps the area which is the least developed in most countries in the region is that of research in teacher education. In many countries, there is a scarcity of research in this area. Nevertheless, it is an important area of potential activity, and there is a pressing need to identify crucial themes for research in teacher education. The following have been identified by Member Countries as being useful research studies in the area of teacher education.

Longitudinal studies. This would involve a determination of how selection, training and placement variables moderate each other and how they may be linked to teacher success.

Selection studies. These studies would involve the motivational basis for choosing teaching as a career, and whether an early decision to take up teaching affects teaching success.

Training studies. These studies would concern training procedures indigenous to a given culture, and how these are affected by the use of modern communication technology.

Placement studies. These would look into the ways in which beginning teachers are socialized, the effects of different types of supervision on beginning teachers, the influence of immediate peers, the influence of pupil behaviour on teacher behaviour, and the effects of social environment on a teacher's behaviour.

Effectiveness studies. These studies would help establish which type of teacher behaviour could best be taught to future teachers.

Teacher attributes studies. These studies would seek to identify the relationship between teacher attributes/qualities/skills and student behaviour.

Impact studies. These would include studies to assess the effect of the use of modern communication technology on teacher effectiveness and student learning outcomes.

Conclusion

Many of the developments in teacher education discussed in this chapter are currently being translated into reforms. However, one potential problem is that the initiatives and innovations designed to strengthen education have also been somewhat disjointed in many countries.

This chapter provides an holistic perspective of current developments in teacher education which may be considered in effecting comprehensive reforms in teacher education in interested Member Countries of the region.

Volume two of this report provides a much more detailed review of the initiatives, reforms and innovations in teacher education that are currently occurring in fifteen countries in the Asia-Pacific region.

Chapter 3

SUMMARY OF INNOVATIVE DEVELOPMENTS IN TEACHER EDUCATION

One of the main aims of APEID is to facilitate the flow of information about innovations and initiatives in teacher education programmes among the 28 Member States in the Asia and Pacific region. By gathering and sharing such information, Member States become more aware of educational reforms occurring in their own countries and elsewhere in the region.

Similarly, the purpose of this volume of the report is to present information regarding current innovations and initiatives in teacher education that are occurring in Member States in Asia and the Pacific and thereby assist in the exchange of information among countries pertaining to the types of teacher education programmes that do exist in the region. This volume also examines trends and developments in education and schooling in the region to establish the overall context within which developments in teacher education are occurring; the second volume presents more detailed national survey studies of current innovations and initiatives in teacher education.

This summary of innovations and initiatives in teacher education is organized according to the following ten main headings:

- pre-service teacher education;
- teacher induction;
- in-service teacher education;
- specialized teacher education;
- teacher recruitment and admission;
- structural changes to teacher education;
- system links and cohesion, and the ways used to organize teacher education;
- policy changes relating to teacher education;
- training of teacher educators; and
- research on teacher education.

This summary is meant only to convey the 'flavour' of the material contained in individual country case studies. Countries identified as having developed particular innovative practices are mentioned for purposes of illustration only—this is not to imply that other countries in the region have not undertaken similar developments.

These innovations have resulted from the first three cycles of APEID activities and do not refer specifically to fourth cycle (1987-1991) activities.

Pre-service Teacher Education

The initial preparation of teachers is critically important in teacher development and should reflect both the expectations which the community holds about the role of the teacher and the skills and abilities of individuals who enter the profession. This approach to teacher education supports the widely held view in the Asia-Pacific region that teachers have a significant social development function which is far greater than the simple transmission of knowledge.

There is a general concern within the region over the supply and quality of entrants to teacher education institutions. There has been a tendency in recent years for standards of entry to be raised and more specific academic qualifications to be required of applicants. In many countries, interviews are an important part of assessment procedures.

All countries have selection procedures during pre-service training, but some countries are reluctant to terminate students. Supply and demand factors are responded to by changes in entry age, level of qualifications and duration of courses. Responses vary among countries.

Since teaching is a process ultimately tied to the culture of the community, the content of teacher education programmes must be responsive to expressed community needs. In one striking example of this belief, the New Zealand general public was invited to participate in a review of the curriculum in New Zealand schools. Over 21,000 submissions were received; the draft report contains a number of proposals for teacher education.

In simple terms, it seems that the key force in realizing educational innovation is national development. This principle, expressed in all country case studies, has clear implications for both content and structure of teacher education programmes.

An example is the proposal, listed as an innovation from the Philippines, that both primary and secondary teacher education programmes have a common general education component which emphasizes new thrusts of education in that country—namely, humanism, Filipinism and social responsibility. Similarly, it has been proposed that the teaching style of pre-service courses be altered to ensure that future teachers are innovative thinkers capable of creatively dealing with the challenges of education. This has been accepted as a guiding principle for teacher education programmes in China and many other countries.

Important innovations in pre-service teacher education have occurred. In the Maldives, these include: raising teacher training to institute level; school experience (observation in schools) becoming an important part of the teacher training programmes; CCTV being used in micro teaching programmes; and teaching aide workshops being included in training courses.

New Zealand has established 'teaching outposts' to train students in school-based practices. Research seems to support the view that this provides effective initial teacher training in the one-year course for secondary teaching. Additionally, twenty per cent of teachers' college positions in New Zealand are short-term contracts to attract teachers and other specialists from the teaching field. The positions of these personnel are protected while they are in college.

In Japan, in the pre-service area, graduate schools of teacher education have been established to elevate the quality of primary and secondary school teachers through the exploration of practical sciences in primary and secondary education. This is seen as an effective response to the lack of practical training in many pre-service institutions.

Developments in Malaysia include the following.

- The provision of 'conversion' courses in the teaching of Bahasa Malaysia/English for science and mathematics graduate teachers has helped overcome the shortage of Bahasa Malaysia/English teachers.
- Inclusion of a primary education package in the training of lower secondary school teachers has helped make them more flexible in terms of development in schools.
- The introduction of such integrated courses in primary teachers' education as 'man and his environment' and 'manipulative skills' in response to the new primary school curriculum has also been helpful.

The three-year pre-service programme for primary and secondary recruitment in Sri Lanka has been raised to age 18 to 23. There presently are six colleges of education, each college caters to about 5,000 students. The number of colleges is expected to increase. The curriculum of this pre-service programme is newly developed and includes new subject areas.

In other developments, newly appointed staff have higher educational qualifications than in the past; and evaluations consisting of continuous assessment, tests and exams are the norm.

With regard to teaching strategies, importance is being given to group teaching, group learning, self-learning, simulation and micro teaching; special teacher education programmes have been developed for special areas, such as Plantation and Mahaweli.

New subjects have been introduced into the teacher education curriculum. These include lifelong education, educational research, population education, community education, education sociology and education technology.

There has been an integration of theory and practice within professional courses through provision of additional field-based experiences (Philippines).

Greater emphases within professional education is being placed on strategies, instructional technology, and human development (Philippines).

Teacher Induction

Some countries already recognize the need for newly trained teachers to receive assistance and supervision during the first teaching appointment. This provides the new teachers with an opportunity to consolidate their understanding of theoretical issues and the application of practical teaching techniques in a supportive and encouraging school setting. Schools are sometimes staffed to allow time for some senior staff, selected for their exemplary teaching, to conduct induction programmes. Some education authorities assign senior officers to be responsible for the supervision and induction of recent graduates.

Examples of innovations in regional countries include the following.

- Each school in New Zealand which has a beginning teacher receives an extra 0.2 effective full-time teaching position for the purpose of developing an induction programme for that teacher.
- Beginning teachers are required to undergo a full year of training immediately after their employment under the guidance of supervising teachers. This training concerns both actual teaching and other duties of teachers (Japan).

- In administering training for beginning teachers, each school should establish a systematic mechanism whereby the supervising teachers and all other teachers at the school co-operate in the training of beginning teachers under the leadership of the principal (Japan).
- Specifically appointed supervising teachers are assigned to schools where beginning teachers have been placed. Further, every prefectural government should develop an appropriate structure for administering in-service programmes, including the appointment of supervisors in charge of these programmes (Japan).
- There is a provision for a two-tier orientation programme for newly recruited teacher educators at both the college and national level (Malaysia).

In-service Teacher Education

In all of the countries surveyed, emphasis is placed on teacher education and development as a process that extends throughout an individual's career.

It is also recognized that teachers at all levels of provision (primary, secondary, vocational and non-formal) require regular opportunities for further study, for both personal and professional growth, so that they can maintain their commitment and motivation, update knowledge and skills, be exposed to new curricula and teaching materials, and have access to a reorientation programme if they wish to move into a different field of teaching.

There have been many developments in teacher education in Australia in recent years. Most significant perhaps has been the adoption of a model of professional development under which teachers now undertake various in-service and other courses over the full length of their teaching career, either to update knowledge and skills or to obtain additional formal qualifications such as a Master's degree (Australia).

School-based in-service teacher education is being undertaken by individual schools under their own planning. There is also a type of in-service education carried out by individual teachers for their own professional growth through attending advanced level schools and even through independent study. It is believed that the following three major premises should be in operation in actual school-based in-service teacher education.

- Teachers should be involved in the identification and articulation of their own training needs.
- Growth experiences for teachers should be individualized.
- The single school is the largest and most appropriate unit for educational change.

Research to Improve Teaching-Learning Practices, published by the Unesco Regional Office of Education, Bangkok, in 1984, noted that these three principles were successful in practice and had several advantages over college-based programmes.

There have been many other innovations and initiatives in this area. In the Republic of Korea, for example, by 1989, each Municipal and Provincial Board of Education will have established in-service teacher education institutes independent of those attached to teachers' colleges. This will enhance the quality of teachers.

The most conspicuous change in in-service education in the Republic of

Korea during recent years is the development and operation of programmes for educational administrators and professionals by the National Institute of Educational Research and Training, which employs participation-orientated instruction as opposed to lecture-dominated instruction. Techniques used include seminars, workshops, discussion with staff members responsible for educational policies, simulation games for establishing future-oriented educational activities, and field trips.

In Japan, with the introduction of the in-service programme, the conditional period of initial appointment for beginning teachers has been expanded from six months to one year.

A multi-media package consisting of print, video/audio and practical work has been prepared in India for in-service education of primary-school science teachers. The package, specifically intended for teachers in rural areas, extends video and audio communications in different languages to nearly 24,000 teachers, some of whom are more than 1,000 kilometres distant from others.

With the announcement of a National Policy of Education in India in 1986, it was decided to orient all teachers for meeting the new demands. A comprehensive set of materials in module form was prepared by a large team of educationist/teacher educators. States made their selection to suit their needs and prepared packages for use in their own languages, which number thirteen. Orientation programmes, organized simultaneously in most parts of the country, provided instruction to nearly half a million teachers. Telecasts via satellite were made available, and some States also arranged radio broadcasts. The exercise will be repeated for the next four years to reach all teachers. One programme, on the air several years now, supports the teaching of English and covers both pupils and teachers.

Malaysia now has a provision for school-based in-service education, which is intended to orient and update teachers' knowledge and competency regarding the new primary-school curriculum. Also, an off-campus first-degree programme has been developed at the Sains University of Malaysia. The programme consists of four years of part-time and one year of full-time instruction.

Innovations in teaching personnel development include: the enhancement of the 'lifelong learning' concept for in-service teachers; changes from rigid formality of in-service training towards the establishment of a multi-level, multi-pattern network of in-service teacher education, such as short-term classes; single-subject training classes; spare-time studies; correspondence courses; radio-TV courses; audio-visual courses (showing samples of successful teaching); satellite programmes, which started October 1, 1986; lecture teams for teacher training; a self-taught examination system; centres for teachers' advanced training; and postgraduate programmes for in-service teachers. Distance education, which delivers in-service training to about 10,000 teachers, was developed in 1983 (China).

The curriculum wing of the Ministry of Education in Pakistan has developed a comprehensive project known as the National Teaching Kit Project (NTKP), through which 60,000 primary schools are provided with teaching kits for the improvement of primary education. This scheme envisages the provision of teaching kits for a variety of school subjects, particularly in science, mathematics, social studies and languages. These are intended to be the tools and instruments through which teachers receive help in producing inexpensive instructional aids using indigenous materials.

In the Philippines, reorientation/retraining of private school teachers of elementary schools has been conducted as a joint project of MECS, FAPE (Funds for Assistance to

Private Education) and PAFTE. There also has been a reorientation of elementary school teachers for the New Elementary School Curriculum (NESC) and the New Secondary School Curriculum (NSSC). This has involved the development of materials for a reorientation programme, the training of national and regional trainers, the direct training of teachers, and the establishment of in-service learning centres for teachers.

There has also been a pilot programme of alternative models of teacher education through the Integrated Teacher Education Programme (ITEP), which was pilot-tested on a national scale in the Philippines. This integrates relevant aspects of elementary and secondary teacher education programmes. Its main purposes are to prepare prospective teachers to teach in both elementary and secondary schools, and provide a competency-based curriculum which focuses on adequate preparation and educational management. The practicum-based teacher education curriculum also involves a structured programme wherein students are required to undergo active involvement with pupils and the community.

The On-The-Spot (OTS) Primary Teacher Training Programme, in which teachers undertake training at the in-service level in their local schools using local materials—rather than having to go away to a teacher training college—has been undertaken in Nepal under both the Education for Rural Development Project and the Primary Education Project.

Specialized Teacher Education

Innovations and initiatives in this particular area include, for example, the overseas training of primary teacher educators (Maldives), the development of a structure of professional post-graduate teacher qualifications as an alternative to academic study at a university but with the same salary recognition as university qualifications, and advanced and higher diplomas offered through distance study. In addition, whenever necessary universities are allowed to provide special one-year or half-year teacher education courses for university students and other adults who have not earned credits in the required professional subjects but wish to obtain teaching certificates (New Zealand).

In Pakistan, distance education has been regarded as a viable mode for quickly reaching a large number of people in remote regions of the country. The National Education Policy of 1979 fully recognized the need for a comprehensive distance education system under the aegis of the Allama Iqbal Open University. The distance education approach in Pakistan is quite comprehensive in terms of such content areas as general, functional, teacher, adult and continuing education. Teacher education programmes of the Open University will also do much to provide trained teachers for the rapidly increasing number of schools.

The Primary Women Teacher Educator Training Programme, which focuses exclusively on the teaching of science at the primary school level, has been effective in Nepal, as has the Radio Education Teacher Training (RETT) Programme, a distance education programme which uses self-instruction materials (SIMS).

Teacher Recruitment and Admission

It is recognized in the national studies that tension exists between issues associated with teacher supply and demand and entry qualification levels to teacher training programmes. National systems of education should recognize the importance of having general studies in teacher training for the promotion of national or community expectations. Such studies will improve the level of teachers' general education and thus the quality of the teaching force.

Examples of innovations in this area include those from New Zealand, Malaysia and other countries.

To improve the mix of teachers, the Department of Education in New Zealand uses television, radio and newspapers in its recruitment campaign to attract candidates into teacher training. Advertisements portray appropriate role models, such as women teaching science subjects, Maori and Pacific Islanders as teachers, and men teaching younger children. In addition, Maoris may be awarded entrance to training (degree equivalence), if a tribal group will attest to the cultural and language suitability of the applicant. A national selection committee further selects candidates it regards as suitable for a one-year course of secondary teacher training.

An extended first-year intake into training has been considered to allow for a selection process during the first year, with students who are seen as unsuitable for teaching having the opportunity to transfer to other programmes but retaining credit for the work completed (New Zealand).

In Malaysia, there has been a lowering of entry qualifications into teachers' colleges for minority groups, such as for candidates from the East Malaysian States of Sabah and Sarawak. There has also been an introduction of a three-stage selection process for candidates admitted into teachers' college—based on academic qualifications, a scholastic aptitude test and an interview.

Other innovations in admission include:

- a recommended-based system of admission being practised in selected normal universities in China, with strong control assured over students' academic achievement, the development of morality, intelligence and physical construction, and a willingness to devote one's career to education;
- experiments with oriented-enrolment programmes in China, in which the local bureau of education is authorized to select candidates who upon graduation are assigned to teach in the areas from which they were recruited;
- recommended-based admission for normal school graduates to teachers' colleges and normal universities provided they return to teach upon graduation (China).

Innovations in teachers' recruitment and promotion include:

- the practice of contract-based recruitment;
- the establishment of a promotion system; and
- the practice of teacher certification as a basis of recruitment (China).

To meet the growing demand for teachers in Pakistan, who are required to help universalize elementary education in the country, 'education' has been introduced as an elective subject from matriculation to the B.A. level. This method may help produce of a group of people able to partially fulfil the teaching responsibilities in the schools.

A major innovation in Thailand occurred in the area of provision—that is, in the procedures and criteria used to select suitable applicants for entry to teacher education programmes. Two systems are used:

- selection-based interviews with prospective teacher candidates to identify those who possess attitudes and values regarded as appropriate for quality

teaching—these applicants are interviewed by a team of school teachers and lecturers from appropriate training institutions; and

- establishment of an entrance examination to identify students who have a good level of academic ability. There are three parts to this examination; they cover knowledge in the subject a student plans to teach, attitudes towards the teaching profession, and level of general knowledge.

Structural Changes to Teacher Education

A common theme in the country reports is that teacher education institutions should develop close links between one another, and between themselves and the school systems which they serve, to improve the relationship between theory and practice.

The absence of such links in the past has led to many difficulties. For example, schools in Japan are often reluctant to receive students for practice teaching sessions because universities have not given careful consideration to the personal qualities of students before sending them out; consequently, availability of practice teaching places has been severely limited. To rectify this situation a network between the university, the local government (Board of Education) and the schools has been proposed. The forging of these types of links has occurred in a number of countries and has met with considerable success.

In New Zealand, 20 per cent of teachers' college positions are short-term contracts. This attracts teachers and other specialists from the teaching field; their positions are protected while they are at the colleges. This procedure ensures that the content of teacher education courses is consistent with the practice that occurs in the schools. In addition, New Zealand has established a number of 'teaching outposts' where students are trained in ways which are more school-based. Research seems to support the view that this provides effective initial teacher training in the one-year course for secondary teaching.

Other innovations in Member Countries in this area include:

- a proposal to overcome the lack of co-ordination between schools and teacher training by establishing a network between the university, the local government (Board of Education) and the schools (Japan);
- establishment of the National Institute of Educational Management (NIEM) to conduct research and needs assessment, as well as to provide in-service courses in educational administration and programme planning and implementation (Malaysia); and
- establishment of educational resource centres at the state level to provide facilities for teachers to upgrade their knowledge and teaching expertise (Malaysia).

System Links/Cohesion, Ways to Organize Teacher Education

Consistent with the view that the education of teachers must be seen as a continuing process, a number of countries have sought to develop links between pre-service courses and in-service programmes.

Rigidity in the specialization of teacher training has also been regarded as a problem in a number of countries. There have been some notable attempts to overcome this through the development of links between primary and secondary training. For instance, Malaysia included a 'primary education package' in the training of lower

secondary school teachers to make them more flexible in terms of development in schools.

The development of these links has also been adopted as a way of maximizing available resources for teacher education. Malaysia has looked at the sharing of personnel and physical facilities between colleges. In Thailand, the 36 teacher education institutions have been grouped into eight clusters for purposes of sharing resources. In addition, in various regions, higher education institutions have engaged in a system of sharing research, staff development and extension facilities. A more efficient use of teacher education resources in the country has resulted.

The need for responsiveness in the content of teacher education programmes highlights the additional need for flexibility within the structure of the programmes and certification procedures. Seen as necessary in a number of country reports, this concern is reflected in the innovation in Malaysia, for example, in which conversion courses in the teaching of Bahasa Malaysia/English are offered to science and mathematics teachers to reduce the shortage of Bahasa Malaysia/English teachers.

Similarly, in Japan, it has been proposed that more flexibility be introduced into the teacher certification system to enable it to better cope with the diversification of upper secondary school education, as well as to attract competent people to teaching positions in vocational and other practical subjects.

When necessary, universities should be allowed to provide special one-year or half-year teacher education courses for university students and other adults who have not earned credits in the required professional subjects but who wish to obtain a teaching certificate.

In a number of countries, in terms of the organizational structure of teacher education, the requirement for community responsiveness has led to a move to decentralize college and university organization and administration, and curriculum planning and evaluation procedures, in an attempt to foster greater sensitivity to local needs. As an example, in Sri Lanka, particular teacher education programmes have been implemented in special areas, notably Mahaweli and Plantation. Other innovations and initiatives include:

- the establishment of a council for teacher education to co-ordinate the programmes of teachers colleges and universities (Malaysia); and
- innovations in administration and management through the establishment of a Teacher Education Department under the State Education Commission (China).

Also, schools in Thailand have been clustered to provide in-service training for teachers. Programmes are now more relevant to the needs of teachers in the schools involved.

Policy Changes Relating to Teacher Education

There have been important innovations and initiatives in Member Countries as regards policy changes involving teacher education.

Teachers are granted leave on full salary to undertake post-graduate training in teaching the handicapped, teacher librarianship, guidance and counselling, and reading recovery (New Zealand).

The New Zealand general public has been invited to participate in a review of the curriculum in New Zealand schools; 21,000 submissions were received and the draft report contains a number of proposals for teacher education.

More flexibility has been introduced into the teacher certification system to enable it to better cope with the diversification of upper secondary-school education, as well as to attract competent people to teaching positions in vocational and other practical subjects (Japan).

In Malaysia, itinerant music teachers have been appointed to serve a cluster of primary schools, especially in rural areas, to help overcome teacher shortage in this subject. The scheme has now been extended to remedial teachers.

The utilization of physical facilities in teachers' colleges has been maximized by doubling the yearly intake of students and extending working hours (Malaysia).

In China, there has been an innovation in thinking. There is now a realization of the importance of teacher education in assisting the modernization drive and open-door policy. This is especially important in today's world of modern technology. Thus, teacher education is regarded as a strategic measure in China's social economic and cultural reconstruction; and teacher education is given a high priority in the distribution of finance, personnel and facilities, as well as in arrangements for capital constructions, recruitment of teaching staff and admission of excellent candidates.

In light of the objectives of the Education Policy 1972-1980, the curriculum wing of the Ministry of Education in Pakistan launched a comprehensive programme to revise the curricula of teacher education programmes in the country. Many innovations, such as introducing a semester system of education, making teacher education a non-vocational programme and offering specialization areas, have been launched through the revised curricula.

Initiatives have been taken by the government in the Philippines, particularly the Ministry of Education, Culture and Sports, to tackle issues and problems on a collaborative basis with professional organizations and institutions. In teacher education, curriculum development has always been undertaken by the Ministry in collaboration with the Philippine Association of Teacher Education (PAFTE). PAFTE developed prototype syllabi for the new courses in the new curricula, incorporating locally authored textbooks for these courses. 'Policies and Standards for Teacher Education,' passed in 1983 as MECS Order No. 26 and revised as MECS Order No. 37 in 1986, was formulated through a series of consultative conferences, particularly with PAFTE. For general education and specialization components, the Association of Philippine Colleges of Arts and Sciences (APCAS) was consulted. Some research grants for teacher education were extended to professional organizations by the Ministry. Joint conferences and assemblies between MECS and non-governmental agencies were conducted to discuss issues and problems in teacher education. Reorientation and retraining of private school teachers from elementary schools were conducted as joint projects of MECS, the Fund of Assistance to Private Education (FAPE) and PAFTE.

Also in the Philippines, there has been a granting of incentives and benefits to voluntary accredited schools. Voluntary accredited schools are schools which decide to upgrade themselves, not because they are forced to do so, but because they want to do so. Voluntary accreditation of schools is undertaken by peers, the criteria of evaluation used being pre-established by the accrediting agency. Criteria are beyond the minimum requirements of the Ministry; accreditation is applicable to both public and private institutes (Philippines).

Training of Teacher Educators

Because the teacher is the linchpin in the system of education, teacher preparation should be of paramount concern in any society. The relationship between education and the role of the teacher educator, as well as the facilities required to organize relevant activities for teacher education, need careful attention. Teacher educators, because they are adequately educated in most countries and quite small in size, have never received the attention that classroom teachers have received, so they have had to depend largely on themselves for their own improvement.

Several countries have given attention to some of these problems and have initiated action, such as:

- establishing special comprehensive courses for the preparation of teacher educators;
- setting up special centres to remedy the deficiencies that occur in education of teacher educators, including the conducting of research; and
- the initiating of special programmes for primary level teacher educators

The quality of teacher education programmes largely depends upon the quality of those who are employed to educate the teachers, the educational administrators, technicians and clerical support staff. In many countries in the region, such as Nepal and Thailand, most teacher educators are university graduates, selected largely on the basis of their academic background, who may themselves have little practical experience in schools. As a result, many of their courses are overly theoretical in nature, and the credibility of the staff involved suffers because of inadequate teaching experience.

This is not the situation in all countries, however. In Australia, for example, with few exceptions, those who are employed as teacher educators must themselves have a history of successful teaching in schools, plus post-graduate qualifications in their particular area of teaching. However, once they are appointed to a college of education or university, staff members are not required to return to school to build up further experience, and so, as years pass, they tend to become more and more remote from the realities of the school environment.

Other innovations/initiatives in training teacher educators include the following.

- In India, a research and orientation programme has been developed in such areas of teacher education as micro teaching and teaching models. Teacher educators receive a basic orientation, plus help in planning the work in their institutions, and prepare evaluation reports which are disseminated to other institutions.
- A pilot project on the performance appraisal of teacher educators has been conducted in some teacher colleges (Malaysia).
- There has been an attempt in the Philippines to achieve the professionalization of teaching through conducting professional board examinations for teachers. As a result, passing board examinations is now a requirement for a graduate in education who wants to obtain a licence to teach in elementary or secondary schools.

Research on Teacher Education

Research data is essential both for planning and programming teacher education activities. It is, for example, necessary to have information on teacher demand both in a general sense and in particular subject areas. In addition, it is necessary that training institutions and education departments are aware of the developments that are occurring in schools, so that they can respond to these when designing content and suitable approaches for adoption within the programmes developed. This is important not only at the pre-service level, but also at the in-service level, as courses are to be developed to help upgrade and update the knowledge and skills of teachers.

Research is also required to enable teacher education institutions to evaluate the effectiveness of their programmes to enable them to achieve what they are intended to achieve. This area is often overlooked; the result is that many teachers claim their teacher education courses are overly theoretical and incompatible with the realities of the school and classroom.

Innovations in the area of research on teacher education include the following.

- In Malaysia, collaborative research has been undertaken between teachers' colleges and universities. Collaboration has concerned the perceptions of the 'actual' and the 'ideal' teacher, the relation between teacher attributes, qualities and skills and student behaviour in the classroom, and the usefulness and effectiveness of a foundation/professional course in pre-service teacher education programmes.
- At the University Sains Malaysia, research has been conducted on teaching practice—identifying a set of teaching skills and examining their characteristics—and perceptions of head teachers/senior assistants, as regards the placement and supervision of USM trainees.

Developments since the 1972 Teacher Education Report

As was noted in the introduction, the purpose of this publication is to show what new initiatives and innovations in teacher education are emerging in APEID Member Countries in Asia and the Pacific region, as well as to enable a comparison to be made between the current situation and that described in the 1972 report published by the Unesco Regional Office for Education in Asia, in association with the Asian Institute for Teacher Educators, University of the Philippines, entitled *Teacher Education in Asia: A Regional Survey*.

Annex 1, 'Overview of Teacher Education in Asia: A Statistical Profile,' provides a comparison between 1970 and 1985 in terms of: population (size); illiteracy rates and educational attainment; regional school enrolment development; schooling at the pre-primary, first, second and third levels of education; and the economic-resources devoted to education in the region. It is clear from these statistics that there has been both considerable expansion in the populations of countries in the Asia-Pacific region over the past fifteen years and substantial development in the school systems of countries during the same period. There also has been a significant improvement over the past fifteen years in the provision of school facilities. For instance, there has been a substantial reduction in illiteracy rates, an expansion in enrolment at all levels of education (including teacher education), a reduction in class sizes in many countries as a result of a substantial increase in the supply of teachers, and (in general) an increase in the proportion of GNP devoted to public education expenditure. However, despite this progress, low levels of educational attainment continue to prevail in many countries in the region, with

schooling access and participation rates of certain groups—girls, those from lower socioeconomic backgrounds, ethnic/racial minority groups and those living in isolated geographical regions—being considerably lower than the norm.

In Chapter 1, trends and developments emerging in education in Asia and the Pacific were described, so that innovations and initiatives in teacher education could be examined in accordance with the extent to which they have been responsive to changes in the overall pattern of schooling. It is clear that, although there are some areas of mismatch, the systems of teacher education in the Asia-Pacific countries are innovations, and that they are developing in ways which produce teachers who are equipped to play a vitally important role in facilitating reform within the school systems concerned. In addition, the systems of teacher education examined are often important agents of change, initiating rather than simply responding to change that has already occurred. It is also clear from the case studies of national systems of teacher education that all of the countries examined regard quality teacher education as being crucial to the success of their school systems.

It is widely accepted that teacher education should seek to be an agent of educational change rather than simply being responsive to the change that has already occurred in the school systems of Member Countries. Teacher education can help renovate education and make it more dynamic; this is being largely achieved through qualitative improvement in teacher education programmes. In this regard, it is particularly important to examine the ways in which teacher education can be utilized to help overcome or reduce the special problems faced by such disadvantaged groups as girls, lower socioeconomic groups and people living in remote or isolated areas.

In summary, when a comparison is made between the material contained in the last comprehensive review of teacher education in Asia—the 1972 Unesco study entitled *Teacher Education in Asia: A Regional Survey*—it is found that, apart from the expansion in teacher education systems referred to earlier, several problems and issues continue to be stressed in 1988, as they were in 1972.

Balance of male and female teachers. In a few countries in the region, there is a predominance of female teachers (e.g. the Philippines). Efforts, therefore, are being made to encourage males to enter the teaching profession, particularly at the first and second levels. In other countries (e.g. Nepal, Pakistan), there is a dearth of female teachers. In these countries, the absence of female teachers has been one of the factors for the non-enrolment of girls, especially in remote and tradition-bound communities.

Education of disadvantaged groups. What constitutes being educationally disadvantaged varies from country to country. In some countries, girls are invariably disadvantaged from the point of view of schooling. By reason of socio-cultural traditions, girls are viewed as destined for the home, while boys have priority not only for primary but also for secondary and tertiary education. In a few countries, however, boys and girls have equal opportunity and access for schooling at all levels. In many countries, children living in remote rural areas or residing in slum areas constitute the disadvantaged. Some countries, which are at an advanced level of development, also have pockets of disadvantaged which include ethnic minority groups who are living in remote mountainous areas. In other countries, the children of construction workers, who move from place to place—where schools are not easily accessible—are deprived of educational opportunities.

These disadvantaged groups are generally neglected when countries in the region plan teacher education programmes and curricula.

Low status of teachers. In many countries, the status of teachers vis-à-vis other occupations in society is relatively low, a contributing factor to this social attitude being the relatively low remuneration of teachers. The low status of teachers has two adverse implications for the teaching profession and the welfare of learners, especially those at the first and second levels of education. First, in many countries the better students do not opt for teaching, the priority preference of young people being such professions as medicine, science, engineering, law, economics and business administration. Invariably, those who for one reason or another are unable to gain acceptance to these fields of study enrol in education courses. Second, since in many countries many teachers are mediocre, there is a trend towards deterioration of the teaching in schools.

Quantity vis-à-vis quantity in teacher education. In a few countries, as in Thailand, there exists a surplus of teachers. In these countries, teacher education institutions can be very selective in determining and administering the admission process. A decrease in enrolment can also mean a smaller professor (instructor)/student ratio. It can also mean the existence of a reserve teaching force; this opens up possibilities for further studies and in-service education of the staff. A shortage of qualified teachers exists in some countries.

However, what is urgently needed in many countries are teachers who are effective in reaching out to the disadvantaged groups, one of the main reasons being that teacher educators often have little exposure to the abject living conditions of the poor and therefore lack empathy.

Use of educational technology. In an effort to renovate teacher education, educational technology has taken on a special importance. The level of sophistication of educational technology ranges from simple indigenous materials to the use of radio and television (including video recording systems) and computer technology. The use of sophisticated technology has been shown to enhance the teaching learning process. However, in many countries, the use of sophisticated educational technology is confined to elite schools, which means that children of small elite groups receive accelerated intellectual development, further distancing them from children who live in disadvantaged socio-economic conditions.

Assessment methods and standards. Many countries are moving away from a scheme wherein there is a single external final examination. This has contributed to a reduction in student anxiety, as regards assessment. However, in some countries, the practice of continuous assessment (e.g. class participation, homework, term papers, etc.) has contributed to the deterioration of standards of teacher training institutions; because students obtain assistance from tutors, parents and friends, their performance may not accurately reflect their own efforts and abilities.

Responsibility of teacher education institutions. In most countries, the responsibility of the teacher training institution ends with the awarding of a degree/diploma. Very few teacher education institutions obtain systematic feedback from their graduates—data which could be the basis for further improvement of programmes and courses. There are, therefore, complaints that some teacher education institutions are 'ivory towers,' detached from the realities of the school setting.

Tenure, efficiency and in-service education. Another crucial issue is tenure. Without tenure, teachers and teacher educators feel insecure and this adversely affects efficiency and effectiveness. However, many teacher educators and teachers have no drive for self-improvement and professional growth after they obtain tenure. In some countries, there are no incentives for participation in in-service education, while in other countries the remunerations of beginning teachers and senior teachers are very similar.

Lack of research into teacher education. Noticeable among the experiences of the participating countries is the lack of empirically based research and data to facilitate policy directions in teacher education. For instance, alternative models of teacher education are being implemented in some countries without a sufficient basis as to 'why' these are being used. What seems to be lacking is research identifying exactly what constitutes effectiveness or work success interims of teacher behaviour, attributes and qualities. Research concerning in-service teacher education seems to be severely lacking in terms of governing, delivery, substance and mode. Most of the research available is the result of one-shot surveys or research dealing mostly with the types of problems teachers face in teaching a particular subject. There has been little research, however, of substantive aspects of teacher education that could be used in redirecting it.

As a concluding comment, what this report on teacher education in Asia and the Pacific highlights is that countries in this region have achieved much in devising and implementing innovations and initiatives in teacher education to accommodate the major issues.

ANNEXES

Annex I

TEACHER EDUCATION: A STATISTICAL PROFILE

The purpose of this chapter is to briefly provide some statistical information relevant to schooling and teacher education in Asia and the Pacific countries. This data will enable the more qualitative data that occurs in Chapters 2 and 3 of this volume of the report and in the case studies of the national systems discussed in volume two to be located within a broader context than that which emerges from the studies of innovations and initiatives in particular countries. Some of this information refers to aspects of school systems that have an impact on the demand for teachers; other information refers more specifically to teachers and teacher education. In most cases, the statistics enable a comparison to be made between 1970 and the present, so that the situation detailed in both volumes of this report can be compared with that evidenced in the 1972 Unesco report *Teacher Education in Asia: A Regional Survey*.

The material comes mainly from the Unesco Office of Statistics and includes the sources *Statistical Yearbooks*, *Statistical Digest for Asia and the Pacific*, and *Development of Education in Asia and the Pacific: A Statistical Review*. Although all the tables of statistics that relate to the figures referred to in the text under the various discussion headings are not reproduced here, a representative number of tables is included to convey the flavour of the available statistics which substantiate the discussion presented.

It is noted that many of the statistics presented in this chapter refer to all 31 of the countries that comprise Unesco's Asia-Pacific region, not only to the 15 countries examined in the bulk of this report. The 31 countries are Afghanistan, Australia, Bangladesh, Bhutan, China, Fiji, India, Indonesia, Islamic Republic of Iran, Japan, Democratic Kampuchea, Democratic People's Republic of Korea, Republic of Korea, Lao People's Democratic Republic, Malaysia, Maldives, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Samoa, Singapore, Sri Lanka, Thailand, Tonga, Turkey, Union of Soviet Socialist Republics and Socialist Republic of Viet Nam.

It is also important to note that one of the difficulties encountered in the preparation of this section was the lack of adequate, current statistical data for some countries.

Population¹

The population of the 31 Member States of the Asia and Pacific region in 1985 was estimated at more than three billion people, nearly two-thirds of the world's population. Two countries (China and India) contribute 1.8 billion, almost 60 per cent of the region's population. Eighty-six per cent of the region's population lives in the 27 developing countries; this percentage is expected to rise to 88 per cent by the year 2000.

Although the annual population growth rates for the region are projected to decrease, from 1.9 per cent in the 1970-1980 period to 1.4 per cent in the last decade of this

1. See Table 1.

century, this downward trend varies significantly among the countries in the region. Also, despite declining growth rates, the region's population at the end of the century is projected to be 3.8 billion, an increase of 800 million since 1985.

Presently, about a third of the region's population is under 15 years of age; however, by country, the proportion varies from about 22 per cent (Singapore) to 46 per cent (Maldives). Over one-third of the region's population lives in urban areas; urbanisation is a rapidly growing process. According to UN projections, 43 per cent of the population will live in urban areas in the year 2000.

These people will need to be educated; the pressure on school systems to accommodate the increase in population will continue. This has obvious implications for teacher education, in that there will be an increase in the demand for teachers to staff the expanding school systems.

Illiteracy and Educational Attainment²

Illiteracy rates in the four developed countries of the region (Australia, Japan, New Zealand and USSR) are negligible. However, over one-third of the adult population (15 +) in the developing countries of the region is presently estimated as being illiterate—a significant improvement of the situation since 1970 when nearly half of the population was illiterate. However, a large sex disparity still remains. Male and female illiteracy rates in 1985 were 28 per cent and 44 per cent respectively.

The estimated number of adult illiterates in 1985 in the developing Asia-Pacific region was 618 million (247 million males and 371 million females). This represents 72 per cent of the world's illiterates. This percentage could become even higher (74 per cent) by the year 2000.

Adult illiteracy rates among the region's developing countries vary sharply, from almost zero to between 63 and 81 per cent. In most countries, rates are substantially higher for females and for rural populations.

Low levels of educational attainment prevail in the region. From the data available for developing countries, in the majority of cases, more than one-quarter of their populations have received no schooling; while in 25 per cent of these countries, more than three-quarters of their populations (25 +) did not receive any schooling. This situation contrasts markedly with the developed countries. It is clear from these figures that there will be a substantial reduction in illiteracy in Asia and the Pacific over the next fifteen years; this will further increase the demand for qualified teachers in the region.

Table 4 presents the percentage distribution of the population of 25 years and over according to educational attainment level. It is clear from these figures that a substantial demand for teachers is going to continue at all levels of schooling. If the demand is to be satisfied, there may be a need to increase the percentage of students enrolled at the third level of education who are studying education as their field of study. This increasing demand for teachers will be further affected by such things as the trend for more girls to attend school.

2. See Tables 2, 3, 4 and 5, and Figure 1.

Regional School Enrolment Development³

Since 1970, the combined duration of primary and secondary general education has remained unchanged in the majority of the countries, with 12 years the most common duration. Enrolment at all levels of education for the countries of the region was 589 million in 1985.

Of the 273 million increase in enrolment for all levels of education between 1960 and 1985 in the Asia-Pacific region, 245 million is attributable to the 27 developing countries. Of the developing countries' enrolment increased per cent was in first level education, 35 per cent in second level and four per cent in third level.

By level of education, enrolment in the region between 1960 and 1985 grew faster at the third level (four times) than the second level (three times), which was followed by the first level (1.7 times). Comparing these rates for the major developing regions, they are markedly lower for Asia and the Pacific than for Africa and Latin America and the Caribbean.

The larger relative increases in enrolment, as compared to those of school-age population between 1960 and 1985, have resulted in higher enrolment ratios for all levels of education in the region. Currently, the gross enrolment ratio (GER) for the region is 99 per cent for first level education, indicating that the enrolment capacity is sufficient to enrol all children of primary school age (provided no over-age students are enrolled); for second level the GER is 41 per cent, and for third level it is seven per cent.

In the developed countries of the region primary education is universal. Secondary education is almost universal (95 per cent GER in 1985), and higher education has grown rapidly (24 per cent GER).

For all developing subregions of Asia and the Pacific, the female gross enrolment ratio is lower than that for males in each level of education, despite a reduced gap in the last level. Presently, for the developing countries, female enrolment as a percentage of total enrolment in first level education ranges between 38 and 47; second level is between 32 and 46; third level is between 26 and 44.

Enrolment in Pre-primary Education

From the data available for countries in the region, it is evident that a rapid expansion in pre-primary enrolment has occurred in the last decade. Nevertheless, the facilities available vary significantly among countries.

First Level of Education⁴

By 1982, in 22 countries—four developed and eighteen developing—the gross enrolment ratio for primary education exceeded 90 per cent. In five countries, the ratio was between 58 and 90 per cent; in two countries, it was less than 40 per cent. These ratios suggest that the education systems in the majority of countries have a capacity to enrol all or most children of primary school-age.

3. See Tables 4 and 5.

4. See Table 10.

Looking at the evolution of developing countries between 1970 and 1985, eighteen had ratios exceeding 90 per cent in 1982, compared to thirteen in 1970. Further, in the seven countries for which these ratios are below 90 per cent, six showed a marked improvement in the ratios in the intervening period.

On the whole, improvement in the enrolment ratios over the last fifteen years was conducive to a reduction in the disparity in enrolment by sex. However, the disparity remains substantial in some countries.

Caution should be exercised when interpreting gross enrolment ratios, as much of the capacity of the education system is still taken by over-aged children, due to late entrance and repetition.

The rate of drop-outs remains a serious concern for the region. In seven countries, less than nine of ten students reach the terminal grade of primary education. Retention is lower in the early grades; however, the limited data available suggest that retention has improved somewhat since 1970.

Data available on new entrants to grade 1 suggest that entering school is no longer a problem in the majority of countries, but that low retention in the primary school system is one of the main obstacles to achieving universal primary education.

Second Level of Education⁵

The development of enrolment in secondary education has been characterized by high growth rates; for the developed countries, the trend suggests that it is becoming almost universal, and for the developing countries considerable progress has been made since 1970.

Apart from a few countries, the rapid growth in secondary enrolment since 1970 has accentuated the disparity by sex in favour of males in the developing countries.

When secondary enrolment is examined by type of education, the main finding is that the bulk of the enrolment is in general education. (The proportion exceeds 90 per cent in 17 countries.) Enrolment in teacher-training is minimal or no longer offered at this level of education. Technical/vocational enrolment represents a small but increasing proportion of secondary education in the majority of countries of the region.

There is an increasing access of students to secondary education, with an increase in survival rates from primary to secondary education.

Third Level of Education⁶

Third level enrolment has more than doubled in 20 of the 24 developing countries, and in four countries the increase has been four or five times. The number of students per 100,000 inhabitants confirms this expansionary trend.

The proportion of female students has constantly increased, but significant disparities still prevail in the region. In ten countries, 40 per cent or more of the enrolment is constituted by females. However, in eleven countries, female enrolment is still about one-quarter or less of third level enrolment.

5. See Table 11.

6. See Tables 8 and 12.

Despite increases in such fields as natural sciences, engineering, medical sciences and agriculture, the majority of students are enrolled in education, humanities and social sciences. In eight countries, three of four students are enrolled in the latter fields of study.

The great majority of the more than one-quarter million students from the region who pursue higher education studies abroad are enrolled in institutions in North America (56 per cent) and Europe (24 per cent).

Resources⁷

At the regional level during the 1970-1985 period, the expansion of the teaching force more than kept pace with that of enrolment, resulting in a lowering of the pupil/teacher ratio for first and second level education. However, for these two levels of education, the number of pupils per teacher is significantly lower in the developed countries (first level, 19; second level, 15) than in the developing ones (first level, 30; second level, 19), although a narrowing of the gap has occurred. The proportion of female teaching staff has increased for first level education in the majority of the developing countries.

Currently, public educational expenditure, expressed as a percentage of GNP, is relatively low in the developing countries of the region in comparison to other regions in the world. For eleven countries, this percentage is less than three. However, despite financial difficulties, it is evident that public support to education has continued. In nine developing countries, the share of GNP devoted to education increased; it fluctuated or was stable in six, and decreased in five.

As a proportion of total government expenditure, public education expenditure ranged from five per cent to more than 20 per cent in the countries of the region.

Important changes have occurred or are under way in the allocation of resources by level of education in many countries, with an increasing share going to secondary and higher education.

Emoluments of teachers absorb most of current expenditure—especially at the first and second levels (80 per cent and 70 per cent respectively)—in the majority of countries.

7. See Tables 6, 7 and 9.

Table 1
Total Population, 1970-2000

(Millions)

	Number of Countries	1970	1985	2000
World	all	3,696	4,826	6,119
Asia and the Pacific - as % of World Total	31	2,328 63.0%	3,047 63.15	3,781 61.8%
Developed Asia and Pacific	4	361	417	461
Developing Asia and Pacific - as % Total Asia and Pacific - as % of World Developing Countries	27	1,966 84.5% 75.0%	2,629 86.3% 72.7%	3,320 87.8% 69.3%

Source: *Unesco Statistical Yearbook 1987*

Table 2
**Percentage Illiterate Aged 15 Years and Over: Estimates and Projections
by Regions and Subregions, 1970-2000**

(Percentages)

Region and Subregion	1970	1975	1980	1985	1990	1995	2000
World	37.1	33.8	30.6	27.7	25.1	22.8	20.7
Asia	51.4	46.0	40.9	36.3	32.4	29.3	26.5
East Asia()	49.3	42.3	35.4	29.3	24.6	20.8	17.4
Southeastern Asia	38.2	31.9	26.3	21.3	17.2	13.9	11.2
Southern Asia()	67.2	62.7	58.5	54.7	51.0	47.7	44.6
Oceania(3)	56.6	59.3	53.1	47.5	41.6	35.6	30.0
Developed Asia and Pacific()	1.9	1.5	1.2	1.0	0.9	0.7	0.7

(1) Excluding Japan.

(2) Including Turkey.

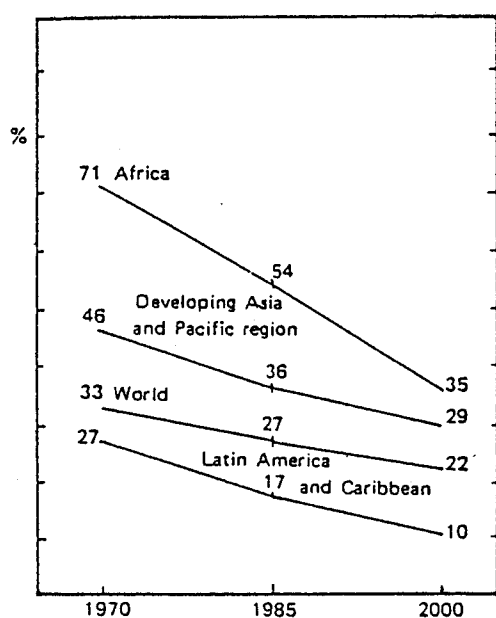
(3) Data refer to Fiji and Papua New Guinea

(4) Australia, Japan, New Zealand and the U.S.S.R.

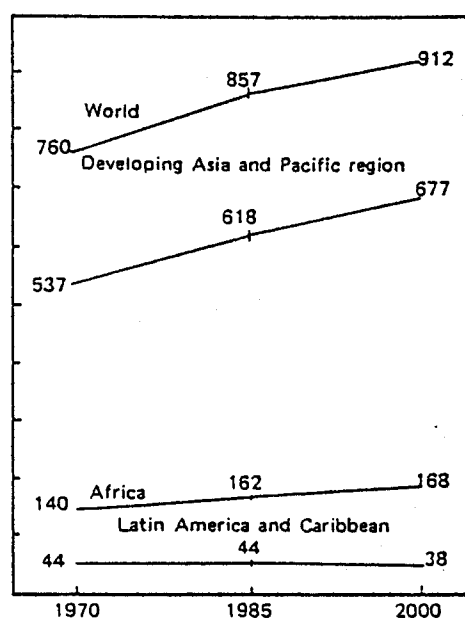
Source: *Unesco Statistical Yearbook 1987*

Figure 1
Illiteracy of Population Aged 15 Years and Over by Major Region, 1970-2000

a. Illiterate rates (%)



b. Illiterate population (in millions)



Source: *Unesco Statistical Yearbook 1987*

Table 3
Literacy in Countries of Asia and the Pacific, 1970 and 1980

(Thousands)

Country	Number of Illiterates Aged 15 and Over			Literacy Rate	
	1970	1980	Variation (%)	1970 (%)	1980 (%)
Bangladesh	27,694	32,606	17.7	24.5	31.8
China	243,300	220,200	-9.5	52.8	66.7
Fiji	77	70	-9.1	73.8	82.4
India	209,350	235,937	12.7	34.0	42.4
Indonesia	32,196	29,111	-9.6	54.0	67.7
Korea, Rep. of	2,778	2,101	-24.4	85.0	91.7
Malaysia	2,414	2,536	5.1	59.5	69.8
Nepal	5,785	6,558	13.4	12.6	20.1
Pakistan	28,014	33,999	21.4	20.6	28.9
Philippines	3,730	3,074	-17.6	81.8	89.2
Singapore	394	364	-7.6	68.9	79.1
Sri Lanka	1,675	1,722	2.8	77.0	81.7
Thailand	4,246	3,409	-19.7	79.0	87.7
Viet Nam	5,980	4,347	-18.9	76.5	84.5

Note: 1980 was the most recent year for which reliable information was available for countries listed.

Source: *Unesco Statistical Yearbook 1987*

Table 4
Percentage Distribution of the Population of 25 Years and Over
According to Education Attainment

(Percentages)

Country	Year Group	Age Schooling Level(t)	No.	Percentage of the Population Highest Level Attained		
				1st Level(2)	2nd Level	3rd
Australia	1981	25+	0.9	29.3	48.3	21.5
Bangladesh	1981	25+	70.4	16.7	7.4	1.3
China	1982	25 +	44.5	32.7	21.7	1.0
India	1981	25+	72.5	11.3	13.7	2.5
Indonesia	1980	25+	41.1	48.4	9.6	0.8
Japan	1980	25+	.6	45.3	39.7	14.3
Korea, Rep. of	1980	25+	19.7	34.5	36.9	8.9.
Malaysia	1970	All ages	43.4	42.6	13.9	13.9
Nepal	1981	25 +	40.2	29.4	22.7	6.8
New Zealand	1981	25+	1.2	41.5	26.6	30.6
Pakistan	1981	25+	78.9	8.7	10.5	1.9
Philippines	1980	25+	11.7	54.1	18.9	15.2
Samoa	1976	25 +	60.0	60.0	37.8	2.2
Singapore	1980	25+	43.7	38.3	14.6	3.4
Sri Lanka	1981	25+	15.9	48.9	34.1	1.1
Thailand	1980	25 +	20.5	69.7	6.8	2.9

(1) Includes uncompleted and completed first level of education.

(2) Includes uncompleted and completed second level of education.

Source: *Unesco Statistical Yearbook 1987*

Table 5
Gross Enrolment Ratios for Girls at the First and Second Levels of Education,
1970 and 1982

(Percentages)

Country	First Level			Second Level		
	1970	1982	Variation 1970-82	1970	1982	Variation 1970-82
Afghanistan	7	14	7	2	5	3
Australia	115	108	-7	80	92	12
Bangladesh	34	49	15	6	7	1
Bhutan	1	10	9	-	1	
India	56	70	14	15	21	6
Indonesia	71	109	38	11	27	16
Iran	53	81	28	21	33	12
Japan	99	100	1	86	94	8
Korea, Rep. of	103	103	0	33	82	49
Lao P.D.R.	48	93	45	2	21	19
Malaysia	84	91	7	28	50	22
Mongolia	116	108	-8	69	90	21
Myanmar	83	84	1	17	21	4
Nepal	8	43	35	3	9	6
New Zealand	109	104	5	76	82	6
Pakistan	22	33	11	5	8	3
Philippines	107	107	0	45	67	22
Singapore	102	102	0	45	65	20
Sri Lanka	94	101	7	48	55	7
Thailand	87	93	6	16	29	13
Turkey	93	95	2	15	28	13
U.S.S.R.	103	105	2	86	96	10
Viet Nam(1)	114	106	-8	39	48	9

(1) Data for 1970 refer to 1975.

Source: *Unesco Statistical Yearbook 1987*

Table 6
Total Public Expenditure on Education as Percentage of Gross National Product (GNP), 1970, 1975 and 1981

(Percentages)

Country	1970	1970;	1981
Afghanistan()	1.1	1.3	2.0
Australia	4.2	6.2	5.8
Bangladesh(2)	-	1.1	1.7
Fiji	4.2	4.7	5.8
India	2.8	2.8	3.0
Indonesia	2.8	3.0	2.2
Japan	3.9	5.5	6.0
Korea, Rep. of	3.6	2.2	3.5
Malaysia	4.4	6.3	7.0
Nepal	0.6	1.5	1.9
New Zealand	4.6	5.6	5.3
Pakistan	1.7	2.2	1.9
Philippines	2.6	1.9	1.9
Singapore	3.1	2.9	3.7
SriLanka	4.0	2.8	3.0
Thailand	3.5	3.6	3.7
Tonga	-	2.8	3.4
Turkey	2.9	-	2.9
U.S.S.R.()	6.8	7.6	7.0

(1) Data for 1981 refer to 1980.

(2) Expenditure of Ministry of Education only.

(3) As percentage of net material product (NMP).

Source: *Unesco Statistical Yearbook 1987*

Table 7
Total Public Expenditure on Education as Percentage of Total Government Expenditure, 1970, 1975 and 1981

(Percentages)

Country	1970	1975	1981
Australia	13.3	14.8	14.5
Bangladesh	-	13.6	8.6
Fiji	15.6	19.5	11.3
India	10.7	8.6	9.6
Indonesia	-	13.1	9.3
Iran	9.6	-	13.1
Japan	20.4	22.4	19.4
Korea, Rep. of	21.4	13.9	18.7
Malaysia (1)	17.7	19.3	16.4
Pakistan	4.2	5.2	5.1
Philippines (1)	24.4	11.4	10.3
Singapore	11.7	8.6	8.5
Sri Lanka	13.6	10.1	8.7
Thailand	17.3	21.0	20.3
Turkey (1)	13.7		10.5
U.S.S.R.	12.8	12.9	10.9

Source: *Unesco Statistical Yearbook 1987*

Table 8
Enrolment at the Third Level of Education by Field of Study in Asia and the Pacific, 1970 and 1980⁽¹⁾

	1970		1980		Index 1980
	Enrolment	%	Enrolment	%	
(1970 = 100)					
Total all fields	6,633,345	100.0	11,917,755	100.0	180
Education	511,213	7.7	922,993	7.7	181
Humanities and Social Sciences	3,739,667	56.4	6,837,217	57.4	183
Natural Sciences and Engineering	1,794,641	27.1	3,005,054	25.2	167
Medical Sciences	297,195	4.5	595,622	5.0	200
Agricultural Sciences	170,224	2.6	276,045	2.3	162
Others	120,405	1.8	280,824	2.4	233

(1) Excluding China, Fiji, Mongolia, U.S.S.R. and Viet Nam.
 Source: *Unesco Statistical Yearbook 1987*

Table 9
Selected Indicators on Teaching Staff by Level of Education in Asia and the Pacific, 1970-1982

	Year	Total teaching staff (in millions)			Female teachers in %		Pupil/Teacher ratio		
		1st	2nd	3rd	1st	2nd	1st	2nd	3rd
Asia and the Pacific region (31 countries)	1970	8.4	4.9	0.8	43	40	32	19	14
	1975	10.8	6.7	1.1	41	38	30	19	14
	1980	11.8	8.3	1.4	42	35	30	18	14
	1982	12.5	8.2	1.5	40	35	28	18	14
Developed (4 countries)	1970	2.0	2.0	0.4	67	59	19	15	15
	1975	1.8	2.2	0.5	67	59	19	15	14
	1980	1.9	2.0	0.6	67	57	19	15	13
	1982	1.9	1.0	0.6	67	57	19	15	13
Developing (27 countries)	1970	6.4	2.9	0.4	35	27	35	22	12
	1975	9.0	4.5	0.6	36	28	33	21	13
	1980	9.9	6.2	0.8	37	28	32	19	14
	1982	10.6	6.2	0.9	36	29	30	19	14

Source: *Unesco Statistical Yearbook 1987*

Table 10
Education at the First Level: Teaching Staff and Pupils
and Pupil/Teacher Ratio

	Staff	Pupils	Pupil/ Teacher Ratio	Staff	Pupils	pupil Teacher Ratio
Australia	91280(70)	1688121(49)	21	107396(71)	1530463(49)	18
Bangladesh	153859(8)	8240169(37)	54	189900(8)	8920293(40)	47
China	5499400(37)	146270000(45)	27	5376800(40)	133701800(45)	25
India	134576(26)	72689840(39)	43	(1984)1458140(26)	83932704(40)	42
Indonesia	787400(NA)	25537053(46)	32	(1984)1131271(NA)	29909188(48)	26
Japan	470991(57)	11750543(49)	25	464173(56)	11095372(49)	24
Korea (Rep. of)	119064(37)	565002(49)	48	(1986)126671(44)	4798323(49)	38
Malaysia	73304(NA)	200858(NA)	27	91099(50)	2191676(49)	24
Maldives	-	-	-	-	-	-
Nepal	27805(10)	1067912(28)	38	(1984)46484(10)	1747857(27)	39
New Zealand	22893(66)	381262(49)	22	(1982)17306(69)	359011(49)	21
Pakistan	150004(32)	5473578(33)	36	(1984)191598(32)	7388645(32)	39
Philippines	264241(80)	8033642(49)	30	(1984)286246(95)	8793763(49)	31
Samoa	1438(71)	33012(48)	23	(1983)1502(72)	31457(48)	21
Sri Lanka	8772(NA)	2081391(NA)	-	144707(NA)	2242645	32
Thailand	299473(49)	7392563(48)	23	369822(NA)	7150489(NA)	19
Viet Nam	204104(65)	7887439(47)	39	235791(70)	8125836(48)	34

1. Figures in brackets show percentage who are females.
2. Figures include both public and private schooling.

Source: *Unesco Statistical Yearbook 1987*

Table 11
Education at the Second Level: Teaching Staff and Pupils

		1980		1985	
		Staff	Pupils	Staff	Pupils
Australia	TT				
	SL	85340(45)	1095610(50)	105955(48)	1271543(50)
Bangladesh	TT	772(16)	6704(27)	*1497(20)	8109(23)
	SL	111927(7)	2659208(24)	* 118602(9)	3111267(28)
China	TT	37664(22)	482108(26)	46000(31)	558200(39)
	SL	3171564(25)	56778000(39)	2966400(28)	50926400(40)
India	TT				
	SL	-	~	(1983)	7445917(42)
Indonesia	TT	16648(NA)	232024(60)	*18424(NA)	280313(60)
	SL	385186(NA)	5721815(NA)	NA	7445917(42)
Japan	TT				
	SL	554078(26)	9520948(50)	619105(28)	11052239(49)
Korea	TT				
	SL	109546(26)	4285889(45)	140942(30)	4834339(47)
Malaysia	TT				
	SL	47625(45)	1083818(48)	58630(47)	1294990(49)
Maldives	TT				
	SL				
Nepal	TT				
	SL	16376(9)	512434(20)	17069(9)	455401(23)
New Zealand	TT				
	SL	-	352427(49)	-	*359307(50)
Pakistan	TT	1177(27)	6922(13)	1691(25)	10263(20)
	SL	123817(NA)	2165832(26)	154759(30)	2402121(NA)
Philippines	TT	-	-	-	-
	SL	85779(NA)	2935732(51)	*103493(95)	3323512(51)
W. Samoa	TT	15(47)	222(56)	12(58)	314(59)
	SL	-	-	1983	
Sri Lanka	TT	689(NA)	9321(NA)		
	SL				
Thailand	IT		5388(51)	-	1285(NA)
	SL	-	1919967(NA)	~	*2249780(NA)
Viet Nam	TT	2336(26)	625730(69)		
	SL	127635(57)	3200912(49)		

* 1984.

Figures in brackets show percentage who are females; figures refer to full-time and part-time teachers.

The information covers both private and public schools.

TT = Number in the teacher training area; SL = Total number in second level.

Source: *Unesco Statistical Yearbook 198Z*

Table 12
Education at the Third Level: Student by Field of Study, by Sex

	*	1980		1984	
		M+F	F	M+F	F
Australia	(1)	56720	39014	71586	47184
	(2)	323716	146676	358498	166797
Bangladesh	(1)	3160	888	3752	870
	(2)	240181	33348	436615	78289
China	(1)	339901	-	362432	
	(2)	1161440	-	1443605	
India	(1)	160026	78467		
	(2)	5345580	1396466		
Indonesia	(1)	-	-	236324	89907
	(2)	-	-	980162	316273
Japan	(1)	237421	171509	228685	161648
	(2)	2412117	791264	2403371	825911
Korea (Rep. of)	(1)	74376	36511	134424	82245 (1983)
	(2)	615452	148076	1075969	296449 (1983)
Malaysia	(1)	16842	8321	24121	15256
	(2)	57650	22199	93249	41468
Maldives	(1)				
	(2)	—			
Nepal	(1)	2826	850	3535	581 (1983)
	(2)	38450	7358		
New Zealand	(1)	8617	6540	5807	4608 (1983)
	(2)	78001	31510	86666	36125 (1983)
Pakistan	(1)	5675	2211		
Philippines	(1)	92585	73744	109524	87236
	(2)	1276016	681140	1335889	714113
Samoa	(1)	54	21	98	65 (1983)
	(2)	644	45	562	264 (1983)
Sri Lanka	(1)	-	-	8824	5757 (1983)
	(2)	-	-	63460	18504 (1983)
Thailand	(1)				
	(2)	—			
Viet Nam	(1)	42363	12169		
	(2)	114701	27090		

* (1) = Education Science and Teacher Training; (2) = Total number of students.

Figures include both public and private schooling.

Both full-time and part time students are included.

NB: 1984 is the most recent year for which information was available for all the countries.

Source: *United Nations Statistical Yearbook 1987*

Annex 2

SURVEY OF TEACHER EDUCATION

This survey is intended to help Member States establish a status position in quantitative and qualitative aspects and create a knowledge base and an inventory of selected growth points in the countries of the region in critical areas of common concern to groups of countries.

The results of the survey are expected to be useful to the countries as the basis for formulating approaches individually and collectively for the further development of teacher education in ways that would be supportive of and interrelated with future plans and crucial programmes of educational innovation and reforms.

The methodology and design of the proposed survey are intended to be used flexibly. The various items in the form will, it is hoped, be interpreted by the national authorities to suit the national context. They may be amplified so that the information added makes the presentation fuller. However, the basic structure, for purposes of comparison, and the overall purpose of the exercise, it is urged, should be maintained.

Details about the proposed survey are presented in three sections; the survey questionnaire is included as an attachment.

Section I—General

Explanation of terms

Rationale and conceptual framework of the study

Specific outcomes of the study

Methodology

Section II—Design of Survey

Status survey

Additional studies

Suggestions for future activities

Synthesis of national studies

Section 111—Findings and Recommendations

Attachment—Survey Questionnaire

Section I—General

This section covers the explanation of terms used, such as teacher and teacher *education*, the rationale and conceptual framework, specific outcomes of the study and methodology for the survey.

Explanation of Terms

- **Teacher.** In view of the broadened concept and scope of education in covering formal and non-formal modes of teaching-learning, the term teacher would include teachers at primary and secondary schools, teachers working in non-formal education programmes, and teacher educators/trainers of teachers.
- **Teacher education.** This term has three aspects: when and where teacher education takes place and what it covers. Teacher education is a function that takes place in pre-service education, induction, staff development, in-service education, and continuing education. All of these components will include the role and function of teachers both inside and outside the school with respect to the community and the nation at large.

Rationale and Conceptual Framework

Member States are presently engaged in significant reforms and revitalization of education. Teacher education is a major input to all educational reforms and development, hence the need to reorient and revitalize teacher education programmes for preparing the necessary teacher manpower for educational and national development. The Member States are already convinced of the need for improved and expanded education of the teaching personnel. Within the limit of their resources and felt needs in the realm of teacher education, each has undertaken some innovative development, whether on a systematic or ad hoc basis, or on a large or small pilot scale. There is need to know and share what these innovative thrusts are, what experiences they have generated, and what problems remain to be tackled. People working on such problems as teacher inadequacy and ineffectiveness under different situations can make significant contributions to the general understanding of the problems and issues.

Considerable research material is available in international and national languages, and it needs to be fully tapped for the development and testing of ideas, practices and programmes in teacher education. Moreover, education exists in a very complex set of sociopolitical and cultural settings at micro levels. Some of the important determinants are qualitative and subjective. Micro ethnographic studies of schools, teachers, teaching situations, student home/school relationships, perception of good schools, home and teachers, therefore, are important and complementary to empirical research.

Specific Outcomes of the Study

Specific outcomes concerning the study include:

- presentation of the status position of teacher education in each country with the help of primary and secondary sources;
- identification of growth points and gaps in teacher education programmes and their analysis in terms of factors and forces involved in diversities and complexities in situations in which they operate;
- identification of innovative ideas, programmes and practices in teacher

education initiated in different countries which need support for full development;

- spelling out newer and more dynamic ideas and practices for induction in the system of teacher education to make it more responsive to national needs and aspirations; and
- developing insight into the causes of success and failure of innovative ideas and practices, and into the aspirations aroused and achieved with the help of selected ethnographic studies.

Methodology

The basic tool for the survey is the questionnaire. In addition, visits, observations, interviews and small case studies may be undertaken to add to or authenticate information derived from other sources.

Section II—Design of Survey

The design covers several distinct but interrelated exercises for teacher education, such as:

- status survey, which includes needs assessment, resource and contextual analysis, capacity analysis (in terms of intake, demand and supply of teachers), performance analysis, growth points and gaps, teacher induction and policies, problems and plans;
- additional studies, which include studies on effectiveness of teacher education, and ethnographies;
- suggestions for future activities; and
- synthesis of national studies.

Section III—Findings and Recommendations

The findings and conclusions of the survey, to be presented under the suggested headings in Section II—Design of Survey, should prominently bring out growth points and felt needs in respect to each area of teacher education. The headings may include:

- **The status of teacher education**
 - *Needs assessment.* This may include information about the needs of the various forms of teacher education.
 - *Contextual and resource analysis.* This would show what financial, physical and other resources are available to teacher education, and why they are what they are.
 - *Capacity analysis.* Here information will be given about the qualifications and pre-entry education required of potential teacher trainees and teacher educators, as well as about the supply and demand position with respect to teacher educators and teachers.

- *Performance analysis.* Here will be information about practices for evaluating teacher education programmes and the extent to which institutions and other agencies engage in such evaluations.
- *Policies problems and plans.* This section will contain information about policies and plans to alter the nature of teacher education and enhance its quality, as well as about the guiding principles associated with these proposals.
- *Growth points and gaps.* Here will be information about significant growth points and gaps in teacher education, and about the complex societal factors and forces associated with them. Growth points would include significant new developments and could cover initiatives that have been taken with respect to: school-based in-service education, teacher induction, staff development, and distance education for teacher education. Also, there will be information on how various new initiatives and ongoing activities in teacher education take account of pre-promotion training for potential head teachers, the role of teachers in networking of school clusters, and the role of teachers in raising achievement levels of primary pupils. This section will also identify innovations that deserve support.
- *Teacher induction.* This section will contain additional information about teacher induction practices and dynamic, new initiatives.
- **Additional studies.** Two sections will contain information about studies on the quality and effectiveness of teacher education, and on measures to increase the effectiveness of teacher education programmes. The information will be reported under two sub-headings: effectiveness of teacher education, and ethnographies of teacher education.
- **Suggestions for future activities.** This final part is to contain suggestions about the directions that should be taken by future activities or developments in teacher education, as well as suggestions for future investigations of teacher education.

Attachment—Survey Questionnaire

The survey questionnaire is designed to gain information about the current status of teacher education, in qualitative and quantitative terms, in order to create a knowledge base about areas of need, growth and innovation.

A. Status Survey

I. Needs Assessment

In this section, information is sought about the needs of the various forms of teacher education, and whether country-wide or local information has been obtained about them.

1. Have any local or national surveys of the needs of teacher education (i.e. in-service, pre-service, staff development, etc.) been conducted in the past five years? If so, please name three to five of the most significant ones and, in about 200 words, summarize their findings.

2. If there have been no needs surveys of teacher education, please indicate what you consider to be the most crucial needs.
3. Please identify the most important basic community and national development needs in your country.
4. Describe the extent to which teacher education programmes (in-service, pre-service, staff development, continuing education) take into account these crucial, basic community and national developments needs.

II. Contextual and Resource Analysis

In this section, information is sought about financial, physical and other resources available to teacher education, and about some of the reasons why these are what they are.

1. What proportion of your country's education budget is allocated to teacher education? Also, please indicate the proportion of that allocation that is available for resources other than staffing.
2. Please provide a brief picture of the financial constraints, or otherwise, on teacher education vis-à-vis the financial position of other nationally funded agencies or programmes.
3. What resources (e.g. physical, financial, manpower, etc.) do you regard as the most crucial for teacher education in your country?
4. What are the most critical resource deficiencies for teacher education in your country?
5. Are there any schemes or programmes in your country for the sharing of resources for teacher education in order to offset some of the deficiencies? If any, please describe a few.
6. In particular, do teacher education institutions share resources for teacher education: i) among themselves; ii) with schools; iii) with universities and other institutions for higher learning; and iv) with other community agencies? If so, please describe how this occurs in your country.
7. If no sharing of resources occurs at present, what plans, if any, are there for it to occur?

III. Capacity Analysis

In this section, information is sought about the qualifications and pre-entry education required of potential teacher trainees and teacher educators, as well as about the supply and demand position with respect to teacher educators and teachers.

1. Are there specific provisions and programmes in your country for the training of teacher educators? If so, please give a few examples.
2. With respect to your country's requirements for teacher educators, are there adequate numbers of qualified persons available for posts in: a) primary and b) secondary teacher education programmes?

3. Are there any mismatches between the qualifications of these persons and their teaching assignments? If so, please give examples.
4. Please identify the areas in which this mismatching is most acute in your country.
5. Where there are shortfalls, for example, in staff with certain specializations; what arrangements, if any, are made to overcome them?
6. What steps, if any, are taken in your country to upgrade teacher educators in their particular specializations (e.g. in subject and pedagogical areas)?
7. What plans, if any, has your country for meeting future requirements for teacher educators (e.g. with respect to qualifications, numbers, specialization)?
8. Are adequate numbers of teachers being trained to meet the requirements in your country for:

Primary education:	lower grades?	yes	no
	upper grades?	yes	no
Secondary education:	lower grades?	yes	no
	upper grades?	yes	no
9. For those sections to which your answer was 'yes,' please describe the extent to which supply exceeds demands.
10. For those sections to which your answer was 'no,' please describe the extent to which the supply falls short of the demand and indicate specific areas where the shortfall is greatest.
11. Where a shortfall exists between supply and demand, are any steps taken to meet it? Please give examples.
12. Various qualifications can be required of trainees preparing for primary education—for example, a complete secondary education or less, or other things, such as work experience, certificate courses, special considerations, etc. Please indicate, in those terms, the kinds of entry qualifications required in your country for trainees preparing for primary grades 1 to 3, 4 to 6, and (if applicable) 7 to 8.
13. Various qualifications are also required of trainees preparing for secondary education—for example, a complete secondary education or less, or other things, such as post-secondary certificate courses, university degree, work experience, special considerations, etc. Please indicate, in those terms, the kinds of entry qualifications required in your country for trainees preparing to teach in secondary grades 7 to 8, 9 to 10, and 11 to 12.

IV. Performance Analysis

In this section, information is sought about practices for evaluating teacher education programmes and the extent to which institutions and other agencies engage in such evaluations.

1. Please describe the formal and informal procedures or mechanisms, if any, in your country for evaluating teacher education programmes (in-service, staff development, pre-service, etc.).
2. Have any significant evaluation studies (e.g. surveys, case studies, etc.) been conducted in your country? If so, please name two or three and give a summary of their most salient findings.
3. Have there been any evaluation studies in your country regarding the quality of staff input into teacher education programmes? If so, please name two or three and give a summary of their most significant findings.

V. Policies, Problems and Plans

In this section, information is sought about policies and plans to alter the nature of teacher education and enhance its quality, as well as about the guiding principles associated with these proposals.

1. Are there any institutions, or regional and country-wide proposals, to alter the nature and/or quality of teacher education (i.e. pre-service, staff development, in-service, etc.)? If so, please summarize them and give examples of the two or three most significant ones.
2. Are there any predicted or anticipated problems with respect to these proposals? If so, what are they?
3. Are there any steps being taken or envisaged to offset these problems? Please describe two or three of the most significant ones.
4. If there are no proposals to alter the nature and/or quality of teacher education, are there any generally accepted ideas about what ought to be done? If so, please mention two or three.

VI. Growth Points and Gaps

The purpose of this section is to obtain information about significant growth points and gaps in teacher education and about the complex societal factors and forces associated with these.

1. Describe briefly the important features of two or three significant initiatives that have been taken in the last three years with respect to: a) school based in-service education, b) teacher induction, c) staff development, and d) distance education for teacher education.

2. Have any initiatives been taken in areas of teacher education, other than the four specified above? If so, briefly describe two or three of these in about 300 words.
3. Are any other initiatives in teacher education being planned or about to be implemented in your country? If so, please provide some brief details of two or three.
4. Do any of the preceding initiatives you have mentioned, or any ongoing activities in teacher education, take into account: a) pre-promotion training for potential head teachers, b) the role of teachers in networking of school clusters, and c) the role of teachers in raising achievement levels of primary pupils? If so, please provide a few examples on how each is done.
5. In order to ensure satisfactory implementation, there may be some specific initiatives or innovations that require support in terms of: a) programming and management, b) expertise, c) physical facilities, or d) finance. If applicable, please name about three that you consider deserve such support.
6. Describe briefly some of the most crucial deficiencies in teacher education (i.e. in pre-service, staff development, continuing education, etc.) in your country. In your description, please identify factors or forces affecting their existence.

VII. Teacher Induction

In this section, additional or qualifying information is sought about teacher induction practices in your country and, in particular, about any dynamic new initiatives.

1. What initiatives are taken to induct beginning teachers into their job? Comment briefly on a few.
2. What other steps do you consider should be taken to make induction more effective? Comment briefly on two or three.

B. Additional Studies

The purpose of the next two sections is to obtain information about studies in your country on the nature, including the quality and effectiveness, of teacher education (e.g. in-service, continuing education, staff development, pre-service, induction).

I. Effectiveness of Teacher Education

1. In recent years, has any research been carried out in your country on the effectiveness of training programmes in bringing about changes in trainees' professional competencies, attitudes, etc.? If so, please indicate the most significant outcomes from some of the relevant studies.

2. Whether or not effectiveness studies have been undertaken, please describe any measures that have been taken or are proposed to increase the effectiveness of teacher education programmes.

II. Ethnographies¹

1. Have any ethnographic studies been conducted in the last few years in your country on the nature of teacher education programmes (pre-service, in-service, induction, etc.)? If so, please name two or three and, in about 300 words, summarize their most salient features.
2. Are any ethnographic studies of teacher education being planned in your country? If so, please give brief details of two or three.

C. Suggestions for Future Activities

The purpose of the final section is to obtain information about the directions that should be taken by future activities or developments in teacher education (e.g. in continuing education, staff development, in-service, etc.), as well as suggestions for future investigations of teacher education.

Please comment, in about 300 words, on the kinds of things that should be done or investigated.

1. Descriptive or comparative studies of the complex and diverse relationships (human and other) in educational settings. These studies would include those referred to in Section I (Rationale and Conceptual Framework) of the design statement.

BIBLIOGRAPHY

An extensive literature search was undertaken to identify available research and related literature published since 1980 on reforms and initiatives in teacher education in Asia and the Pacific region. This literature search, which is up to date as of December 1988, involved consideration and examination of the following sources:

- a list of relevant publications held in the Unesco library in Bangkok; and
- both a computer-assisted and manual search of publications on teacher education in Asia and the Pacific. The following sources were consulted: a Dialog search from the Eric database, the British Education Index; Books in Print; LC Marc; Dissertation Abstracts; Australian National Bibliography; Australian Education Index; Education Index; New Zealand Index to Periodicals; Bibliography of Asian Studies; Asian Bibliography; and Educational Documentation and Information Nos. 218/219 and 234/235: In-service Teacher Education.

General: Asia and the Pacific

Ahmad, R.H.; Marimuthu, T.; Ismail, Noryannah. 1987. *Interface of Education with Employment and Leisure in the Context of Alternative Futures*. APEID. Unesco PROAP.

Ahmed, Rais ; Prakash, Brahm ; Burman, B.K. Roy. 1987. 'Reflections on Policies, Plans , Achievements and Prospects of Education, Science, Culture and Communication in South Asia.' Paper presented to the Unesco Regional Research Seminar on Perspectives on Asia's Futures. Bangkok.

Asian Institute for Teacher Educators. 1972. *Survey*. Bangkok: Unesco. *Teacher Education in Asia: A Regional Survey*. Bangkok: Unesco.

Banerjee, R.B. 1982. 'In-service Primary Teacher Education in Other Countries: Australia, Bangladesh, Indonesia, Malaysia, Nepal, the Philippines, Republic of Korea, and Thailand.' *Journal of Indian Education*. 7 (6), 36-38.

Bone, T.R. 1987. 'Changes in the Training of Teachers.' *International Review of Education*. 33 (3), 381-296.

Boorer, D. 1985. 'Academic Excellence and Professional Integrity: The Enigma of Teachers and Their Training in the Third World.' *Quality and Equality in Education*: proceedings of the 13th Annual Conference of the Australian and New Zealand Comparative and International Education Society. Adelaide: Australian and New Zealand Comparative and International Education Society, pp. 137-144.

Bose, Arun. 1987. 'Development, Material and Human Resources and Education: Requiem or Rethinking.' Paper presented to the Unesco Regional Research Seminar on Perspectives on Asia's Futures. Bangkok.

- Buch, P. 1986. 'Teacher Education in the -Context of the New Education Policy.' ***New Frontiers in Education***. 82-87.
- Chik, A W. 1985. 'Teacher Education and the World of Technology; Ideals and Reality.' Paper presented at the World Assembly of the International Council on Education for Teaching. British Columbia, Canada.
- Corrigan, D. 1985. 'Politics and Teacher Education Reform.' ***Teacher Education***. 36 (1), 8-11.
- Cropley, A J. 1981. 'Lifelong Learning: A Rationale for Teacher Training.' ***British Journal of Teacher Education***. Vol. 7, No. 1, pp 57-69.
- Din, J. U. 1987. 'Recruitment and Training of Technical and Vocational Teachers and Trainers.' Paper presented at the Regional Workshop on Technical/Vocational Teacher Training. Chiba City, Japan.
- Donoughue, C. (ed.) 1986. ***In-service: The Teacher and the School***. London: Routledge.
- Dove, L.A. 1982. 'Deployment and Training of Teachers for Remote Rural Schools in Less-developed Countries.' ***International Review of Education***. 28 (1): 3-27.
- Ginns, I.S and Foster, W.J. 1983. 'Pre-service Elementary Teacher Attitudes to Science and Science Teaching.' ***Science Education***. Vol. 67, No. 2, pp 277-82.
- Goble, Norman M. and James F. Porter. 1977. ***The Changing Role of the Teacher: International Perspectives***. Unesco Paris. p. 234.
- Guthrie, G. 1982. 'Reviews of Teacher Training and Teacher Performance in Developing Countries.' ***International Review of Education***. 28 (3): 291-306.
- Hopkins, D. (ed). ***In-service Training and Educational Development: An International Survey***. London: Croom Helm.
- International Labour Organization/Unesco. 1984. ***The Status of Teachers***. Geneva: ILO.
- Jones, A.H. 1983. 'Teacher Education and the 1980s.' ***The Education Index***. 49 (4), 48-50.
- Murad bin Mohammed Noor. 1985. 'The Planning of Education in the Context of Social and Moral Values.' ***Education in Asia and the Pacific: Retrospect: Prospect***. APEID. Unesco ROEAP.
- National Institute for Educational Research. 1982. ***Vocational and Technical Teacher Preparation in Asia and the Pacific***. Tokyo.
- Ogunmilade, C.A. 1983. 'The Role of Educational Technology in Teacher Education in Developing Countries.' ***Educational Technology***. 23: 17-19, Jul.
- Owen, J. 1980. ***The Recent Literature (on the Education of Science and Mathematics Teachers): Implications for the Design of Pre-service Programmes***. Melbourne State College: Tertiary Education Research Unit.
- Paliwal, M.R. 1985. ***Teacher Education on the Move: A Global View—Today and Tomorrow***, New Delhi: Uppal Publishing Company.
- Pick, L.H. and Yu, E. 1985. 'Training of Trainers in Southeast Asia. ***Convergence***. 18 (3/4):
- Roy Singh, Raja. 1986. 'Education in Asia and the Pacific: Retrospect: Prospect.' Unesco ROEAP ***Bulletin***.
- Sharafuddin, A M. 1986. 'Recent Developments in Upgrading Science Education.'

- Unesco ROEAP *Bulletin*.
- Soedjatmoko. 1985. 'The Twenty-first Century Challenge to Learning.' APEID. *Education for Development—Challenges: Dilemmas*. Unesco ROEAP.
- Thompson, A R. and Greenland, J.J. 1983. 'The Implications of UPE for Teacher Education.' *International Review of Education*. 29 (2): 199-213.
- Unesco. 1980. *In-service Primary Teacher Education*. Bangkok.
- Unesco. 1980. *In-service Teacher Education: Developing Innovatory Strategies and Instructional Materials*. Bangkok.
- Unesco. 1980. *Linking Science Education to the Rural Environment: Some Experiences*. Bangkok.
- Unesco. 1980. *New Techniques for Preparing Educational Personnel—Universalizing Education: Selected Innovative Practices*. Bangkok.
- Unesco. 1982. *Distance Learning for Teacher Education*. Bangkok.
- Unesco. 1982. *Distance Learning for Teacher Education: Report of a Technical Working Group Meeting—Vol. I: Current Status Programmes and Practices; and Vol. III: Exemplary Materials*. Bangkok.
- Unesco. 1982. *In-service Primary Teacher Education in Asia: Report of the APEID Finalization Meeting on the Joint Innovation Project*. New Delhi.
- Unesco. 1983. *Learning Needs and Problems in Primary Education: Report of the Technical Working Group Meetings—Vol. II: Training of Educational Personnel*. Bangkok.
- Unesco. 1984. *Blueprint for the Future: Unesco's Medium Term Plan 1984-1989*. Paris: Unesco.
- Unesco. 1985. *A Comparative Survey of the Incorporation of Environmental Education into School Curricula*. Paris. Unesco Environmental Educational Series 17.
- Unesco. 1985. *Building Multidisciplinary Training Networks for Rural Development*. Bangkok: APEID.
- Unesco. 1985. *Teacher Development for Better Pupil Achievement*. Bangkok: APEID.
- Unesco. 1985. *Training of Science Teachers and Teacher Educators: Report of a Technical Working Group*. Bangkok.
- Unesco. 1986. *School-based In-service Training: A Handbook*. Bangkok: APEID.
- Unesco. 1987. *Teacher Education: Issues, Needs and Plans for Action*. Bangkok: APEID.
- Unesco. 1988. *APEID Regional Study Group Meeting on Reform in Teacher Education: Deteriorative Structures and Innovative Strategies. Final Report*. APEID: Bangkok.
- Unesco/UNEP. 1985. *Environmental Education: Module for Pre-service Training of Social Science Teachers and Supervisors for Secondary Schools*. Paris: Division of Science, Technical and Environmental Education
- Unesco/UPEND. 1986. *Environmental Education: Module for Pre-service Training of Teachers and Supervisors of Primary Schools*. Paris: Division of Science, Technical and Environmental Education.
- Yff, J. (ed.) 1984. *Innovations in Teacher Education: The Pursuit of Excellence*. International Council on Education for Teaching: Washington, D.C.

You, In-Jong. 1983. **Guidelines for the Redesign of Teacher Education**. World Assembly of the International Council on Education for Teaching (Washington, D.C., July 11-15).

Australia

Allen, I. 1980. 'Teacher Education in the 1980s: Effects of the Enquiries.' **Youth, Teachers, Curriculum, Evaluation and the Economy**. Monash University. Faculty of Education, pp. 66-77.

Anderson, D.S. and Vervoorn, A. E. 1983. **Access to Privilege: Patterns of Participation in Australian Post-secondary Education**. Canberra: ANU Press.

Atchison, J. 1981. 'Changing Perspectives in Teacher Education: A Multi-cultural Diploma for External Study.' **Polycom**. 28~ 17-19.

Auchmuty, James. 1979. **National Inquiry Into Teacher Education**. Canberra.

Australia. 1984. Commonwealth Tertiary Education Commission. **Issues for Action: Some Preliminary Views on the Improvement of Teacher Education**. Canberra.

Australia. 1986. Joint Review of Teacher Education. **Improving Teacher Education: Report**. Canberra: AGPS.

Australian Association of Directors of Teacher Education Institutions. 1983. **Strategies For Quality Teacher Education in an Australian Context**. Proceedings of the Annual Conference. Woollongong: The Association.

Australian Association of Directors of Teacher Education Institutions. 1984. **Teacher Education and the Technologies**. Proceedings of the Annual Conference. Woollongong: The Association.

Baba, T.L. 1980. 'The Implications of Curriculum Change and Innovation on Teacher Education in the South Pacific.' **South Pacific Journal of Teacher Education**. 8 (3/4): 87-90.

Baldie, B. and Barnes, H. 1981. 'The Development of a School-based Primary Teacher Education Programme.' **Australian Journal of Teaching Practice**. 1 (2): 85-98.

Ball, J. 1986. 'Computer Technology: A Challenge for Teacher Educators.' **South Pacific Journal of Teacher Education**. 14 (2): 64-71.

Beazley, K. (chair.) 1984. **Education in Western Australia** Report of a Committee of Inquiry. Perth: Government Printer.

Beeson, G.W. 1982. 'Teacher Education Programmes: Problems and Prospects for the 1980s.' **New Education**. 4 (2): 95-101.

Beswick, D.G. (et al.) 1980. **Australian Teacher Educators and Education Policy**. Melbourne: University of Melbourne, Centre for the Study of Higher Education.

Birch, Ian; Lally, Mike; Punch, Keith. 1985. **Interface Between Education and Technology: Australia**. APEID. Unesco ROEAP.

Blackburn, J. (chair.) 1985. **Ministerial Review of Post-compulsory Schooling: A Report**. Vols. 1 and 2. Melbourne.

Cameron, P.R. 1981. 'Aspects of Commonwealth Government Involvement in In-service Education in Australia: Future Directions and Emerging Policy Issues.' **INSET** 1 (2): 19-22.

- Cavanagh, D.M. 1982. 'The Merging of Institutions: Contextual Decisions and Teacher Training.' *Australian Journal of Teacher Education*. 7 (2): 1-5.
- Cigler, R.L. 1981. 'Evaluation of Aspects of a Graduate Diploma.' M.Ed. Thesis. Monash University.
- Committee to Examine Teacher Education in New South Wales. 1980. *Teachers for Tomorrow: Continuity, Challenge and Change in Teacher Education in New South Wales*. Sydney: Government Printer.
- Coulter, F. and Invargson, L. 1984. *Professional Development and the Improvement of Schooling: Roles and Responsibilities*. Commonwealth Schools Commission, Canberra.
- Crawford, K. 1985. 'Bi-cultural Teacher Training in Mathematics Education for Aboriginal Trainees from Traditional Communities.' *South Pacific Journal of Teacher Education*. 13(1): 1-10.
- CTEC/CSC. 1986. *Improving Teacher Education*. Report of the Joint Review of Teacher Education, Canberra.
- De Lissa Institute of Early Childhood and Family Studies. 1981. *Trends in Early Childhood Teacher Education*. Adelaide.
- Docker, J. and Hughes, P., 1986. *Evaluation of the Professional Development Programme in Tasmanian Schools*. Education Department, Tasmania.
- Easthope, C.; Maclean, R.; Easthope, G. 1987. *The Practice of Teaching: A Sociological Perspective*. Sydney: Allen and Unwin.
- Eltis, K. 1981. 'In-service in Response to School Needs: Tackling the Problems.' *South Pacific Journal of Teacher Education*. 9(2): 1-12.
- Eltis, K. (et al.) 1983. 'The Changing Face of Continuing Education for Teachers: New Emphases, New Problems.' *South Pacific Journal of Teacher Education*. 11 (1): 1-14.
- Ferguson, J. 1982. 'A Decade of Change for Teacher Education.' *Links*. 4: 18-19.
- Fielding, A.J. and Cavanagh, D.M. (eds.) 1983. *Curriculum Priorities in Australian Higher Education: An Examination of Issues and Practices in Australian Higher Education with Proposals for Curriculum Reform in Teacher Education*. Canberra: Croom Helm Australia.
- Fielding, T. 1985. 'Research and Reconstruction in Teacher Education: Editorial Introduction.' *Australian Journal of Teacher Education*. 10 (2): 1-4.
- Fraser, E.J. and Smith, D.L. 1981. 'In-service Education Associated with Dissemination of an Innovation in Law-related Education.' *South Pacific Journal of Teacher Education*. 9 (2): 56-62.
- Gough, N.P. and Beeson, G.W. 1983. *Change, Co-operation and Co-ordination in Teacher Education*. Melbourne: South Pacific Association for Teacher Education.
- Hall, G. 1982. 'Research and Development in Teacher Education: Australia' *Journal of Teacher Education*. 33: 51-53.
- Haynes, B. 1983. 'Changes in Australian Teacher Education: A Proposal for School-based Teacher Education.' *Australian Journal of Teacher Education* 8(1): 18-24.
- Hewitson, M. (ed.) 1982. *Recurrent Education and the Teaching Role*. Canberra: AGPS.

- Howey, KR. and Zimpher, N.J. 1986. 'New Curriculum Directions in the Education of Teachers.' *Curriculum and Teaching*. 1 (1/2): 93-102.
- Hughes, P. (ed.) 1987. *Better Teachers for Better Schools*. Australian College of Education, Melbourne.
- Hughes, Phillip; Carson, David; Caldwell, Brian. 1985. *Interface Between Education and State Policy: Australia*. APEID. Unesco ROEAP.
- Hull, R. and Baker, R. 1984. 'A Reconsideration of the Practicum as the Critical Element of Teacher Education.' *South Pacific Journal of Teacher Education*. 12(2): 1-11.
- Karmel, P. (chair.) 1985. *Quality of Education in Australia*. Australian Government Printing Service, Canberra.
- Keeves, J. (chair.) 1982. *Education and Change in South Australia: A Final Report*. Government Printer, Adelaide.
- Kelliher, M.H. and Balint, M.S. 1981. 'Integration in Teacher Education: Inspiration and Perspiration.' *Australian Journal of Teaching Practice*. 2(1): 61-65.
- Kennedy, K.J. 1980. 'The Systematic Teaching Training Model.' *South Pacific Journal of Teacher Education*. 8(3/4): 134-138.
- King, L.H. 1981. 'Alternative Teacher Education Programmes.' *Australian Journal of Teacher Education*. 6(2): 12-24.
- King, R.B. and Haynes, B.T. 1980. 'Mature-age Students in Teacher Education.' *Australian Journal of Teacher Education*. 5(2): 42-53.
- Link, R.D. 1983. 'An Historical Perspective on the Reorganization of Teacher education in Australia.' *Journal of Tertiary Educational Administration*. Vol. 5, No. 2, pp. 101-12.
- Lippman, L. 1981. 'Education of Teachers for a Multi-cultural Society.' *TEFL/TESL Newsletter*. 5(3): 34-39.
- Lynch, J. 1981. 'Multi-cultural Education and the Training of Teachers: A Case Study.' *South Pacific Journal of Teacher Education*. 9 (1): 43-54.
- McCarthy, L. 1980. 'Teacher Education in a Multi-cultural Society.' *South Pacific Journal of Teacher Education*. 8(1/2): 59-65.
- McCluskie, P. 1983. 'Teacher Training and Computer Education: The Needs for and Expectations of Post-graduate Courses.' *Independent Education*. 13(1): 31-32.
- McGrath, H. (et al.) 1986. 'Teacher Training for the Classroom Integration of the Disabled.' *South Pacific Journal of Teacher Education*. 14 (2): 28-37.
- McNamara, D. 1983. 'Less Idealism and More Realism: The Programme for Teacher Education.' *Australian Journal of Teacher Education*. 8(2): 31-35.
- McShane, R. 1983. 'Teacher Training: A System-wide Approach.' *Classroom Computing* 2(3):
- Meere, P.W., 1982. *A Study of Some of the Professional Changes that Occur in Neophyte Teachers during the Six Years following Initial Involvement in the Three-year Pre-service Teacher Education Programme*. Macquarie University.

- Middletonj Michael; Brennan, Marie; O'Neil, Maria; Wootten, Trevor.1986. ***MakingtheFuture: The Role of Secondary Education in Australia.*** Commonwealth School Commission. Canberra.
- Morris, R. 1982. 'Recent Developments in In-service Teacher Education: An Attempt at Classification.' ***Forum of Education.*** 41 (2): 23-30.
- Newman, W. 1980. 'Changing Perceptions of School Experience Programmes in Teacher Education.' ***Australian Journal of Teaching Practice.*** 1 (1): 59-64.
- New South Wales. Committee to Examine Teacher Education in New South Wales. 1980. ***Teachers for Tomorrow.*** Sydney.
- Porter, R. 1983. 'The Implications of the Domestic Satellite for the In-service Training of Teachers in Rural and Remote Areas.' ***South Pacific Journal of Teacher Education.*** 11 (2): 54-59.
- Queensland Board of Teacher Education.1985. ***Project 21: Teachersfor the Twenty-f rst Century.*** Toowong, Old.
- Queensland Department of Education. 1986. ***Education 2000.*** Brisbane.
- Reynolds, P. and Clark, M.L. 1986. ***In-service Needs of Teachers and Administrators in Western Australian Schools, 1983.*** Perth: West Australian College of Advance Education.
- Roebuck, P. and Hall, K. 1982. 'Classroom Simulation and Micro Teaching: An Alternative Approach.' ***Australian Journal of Teaching Practice.*** 2 (2): 111-120.
- Schools Commission Project, 1980. ***Schooling for 15 and 16 Year Olds.*** Schools Commission, Canberra.
- Scott, R.L. 1980. 'A Competency-based Programme of Physics Teacher Education.' M.Ed. Thesis.
- Smith, J.S. 1985. 'The Rhetoric and Reality of Teacher Education: Towards a Praxis Model.' ***Australian Journal of Teacher Education.*** 10 (1): 18-33.
- Steinle, J. (chair.) 1983. ***The Challenge of Change:A Review of High Schools in the A.C. T. A.G.P.S.,*** Canberra.
- Swan, D. and McKinnon, K. 1984. ***Future Directions of Secondary Education: A Report. N.S.W.*** Education Department, Sydney.
- Taylor, A. and Middleton, H. (eds.) 1986. ***Strategies for Change: Proceedings of the 1986 Technology Teacher Education Forum.*** Canberra: Australian Council for Education Through Technology.
- Thompson, H. and Levis, D.1980. '(An Experimental Evaluation of Competency-based Teacher Education.' ***South Pacific Journal of Teacher Education.*** 8 (1/2): 34-38.
- Tinning, R. and Fitzclarence, L. 1982. 'Students Supervising Students: An Alternative lo Practicum Supervision.' ***Australian Journal of Teaching Practice.*** 2 (2): 91-100.
- Turney, C. (et al.) 1985. ***A New Basis for Teacher Education: the Practicum Curriculum.*** Sydney: Sydmac Academic Press.
- Warner, D. 1980. 'Micro Teaching: A Case Study of the Establishment of a Development of Awareness Teaching Skills Programme.' ***Forum of Education.*** 39 (1): 37-46.

Warner, D. 1980. 'Transfer of Teaching Skills from the Micro Teaching Laboratory to the Classroom.' ***South Pacific Journal of Teacher Education***. 8 (3/4): 130-133.

Warner, D. and Lipke, I. 1981. 'Towards a Systematic Approach to In-service Education for Teachers.' ***Unicorn***. 7 (2): 180-190.

People's Republic of China

Beijing Teachers' College. 1983. ***References on Modern and Contemporary History of Teacher Education in China***, Beijing Teachers' College Press, Beijing.

Beijing Normal University. 1986. ***Teacher Education in the People's Republic of China***. Beijing: Institute for Educational Research.

Board of Editors for China's Great Encyclopedia. 1985. ***China Great Encyclopedia: Education Volume***. Publishing House of China Great Encyclopedia, Beijing.

Board of Editors for China's Year Book of Education. 1984. ***China Year Book of Education (1949-1981)***. Publishing House of China Great Encyclopedia, Beijing.

Board of Editors for Modern China, Education Volume. 1986. ***Selected References on Higher Teacher Education in Modern China***. East China Normal University Press, Shanghai.

Central Institute for Educational Research. 1983. ***Chronological Events on Education in the People's Republic of China (1949-1982)***. Science of Education Press, Beijing.

Chang, P.T. and Tsui, G. 1984. ***Mathematics In-service Programme in the Province of Taiwan, Republic of China: Its Development, Implementation and Evaluation***. International Congress on Mathematical Education (Adelaide, August, 28).

Department of Planning and Finance, Ministry of Education. 1984. ***Achievement of Education in China (1949-1983)***. People's Education Press, Beijing.

Department of Planning and Finance, Ministry of Education. 1982. ***Introduction to Institutions for Higher Education in China***. Science of Education Press, Beijing.

Education in China. 1986. Beijing. April 5, 8, 13; July 24.

Gu, M. 1984. 'The Development and Return of Higher Education in China.' ***Comparative Education***. Vol. 20. No. 1. pp. 141-148.

Gu, M.Y. 1981. 'Teacher Training in China.' ***Journal of Education for Teaching*** 7 (3), 246-251.

Hundleby, S. and Breet, F. 1986. 'Using Methodology Notebooks on In-service Teacher Training Courses.' ***ELT Journal***. 42: 34-36.

Hurd, P.D. and Kormondy, E.J. 1983. 'Biology Teacher Preparation in the People's Republic of China.' ***The American Biology Teacher***. 45: 83-89+.

Institute for Educational Research, East China Normal University. 1985. ***Selected Papers on Organizational Reform of China's Higher Teacher Education***. East China Normal University Press, Shanghai.

Kent, Ann. 1981. 'Red and Expert: The Revolution in Education at Shanghai Teachers' University, 1975-76.' ***China Quarterly***. No. 86: 304-321.

Li, K. 1986-87. 'Initial Reform in South China Teachers' University.' ***Chinese Education***. 19: 27-41.

- Lia, Wen-xiu. 1984. *Brief History of Teacher Education in China*. People's Education Press. Beijing.
- Liang, S.Y. 1983. *The Prospect of the Development of Teacher Education in the Republic of China: An Explorative Analysis from a Statutory Viewpoint*. World Assembly of the International Council on Education for Teaching (Washington D.C., July 11-15).
- Lo, Billie L.C. 1983. 'Teachers and Teacher Training in China, 1977 to Present.' *China in Readjustment*. Hong Kong: Centre of Asian Studies, University of Hong Kong, pp. 62-91.
- Luo, Zhao Hong and Shi, Min. 1987. 'China's Economic and Social Development Strategy and Educational, Scientific and Cultural Development.' Paper presented to the Unesco Regional Research Seminar on Perspectives on Asia's Futures. Bangkok.
- Mauger, P. 1981. 'Training and More Training to Raise Standards.' *Times Educational Supplement*. 3384:14.
- Notar, E.G. 1987. 'A Comparative Analysis of Teacher Education in the People's Republic of China and the United States.' *Contemporary Education*. 59:34-37.
- Parkins, G. 1986. 'Need for Teachers Raises Their Status.' *Times Educational Supplement*. 3647:14, May 23.
- Parkins, G. 1986. 'Trainees' Courses off the Ground.' *Times Educational Supplement*. 3677:11, Dec. 19.
- People's Daily*. 1986. Beijing. June 25.
- Ren-Mei, T. (et al.) 1985. 'Recent Chinese Innovations in Teacher Education.' *Journal of Teacher Education*. Vol. 36, No. 5, p. 16-19.
- Society of Higher Teacher Education in Heilongjiang Province, Research Division, Haerbin Normal University, Institute for Educational Research, Haerbin Normal University. 1985. *Selected Papers on Higher Teacher Education*. Haerbin University Press, Haerbin.
- Spodek, B. 1987. *Reform in Chinese Kindergartens: The Preparation of Kindergarten Teachers*. Annual meeting of the American Educational Research Association (Washington, D.C.).
- Tan, R.M. (et al.) 1985. 'Recent Chinese Innovations in Teacher Education.' *Journal of Teacher Education*. 36:16-19.
- Tan, R;M. (et al.) 1988. 'Education in the Information Age: The Impact on Teacher Education in China.' *Educational Technology*. 28:48-49.
- Wang, H. (et al.) 1987. 'On the Importance of Improving the Essential Quality of Teachers.' *Chinese Education*. 20:30-42.
- Wong, C. and Rong, S.J. 1985. 'Issues for the Training of Trainers in China.' *Convergence*. 18 (3/4): 23-31.
- Yang, Z. 1986-87. 'Nanjing Teachers University Trains More High School Teachers.' *Chinese Education*. 19:70-71, Winter.
- Zou, J. 1984. 'Teacher Education in China.' *Beijing Review*. 27(13), 27-29.

India

- Adaval, S.B. (et al.) 1984. **Analytical Study of Teacher Education in India**. Allahabad: Amitabh Prakashan.
- Adiseshiah, S. 1985. 'Education Reform Perspectives in India.' Unesco ROEAP. **Bulletin**. 1986.
- Aggarwal, J.C. 1982. **Development and Planning of Modern Education with Special Reference to India**. New Delhi: Vikas Publishing House.
- Ahuja, R.L. 1970. *The Problems of Teachers in India*. Ambala Cantt: The Indian Publications.
- Altbach, P.G. 1987. 'Teaching: International Concerns.' **Teachers College Record**. 88,3,326-329.
- APEID. 1987. **Teacher Education: Issues, Needs and Plans for Action**. Bangkok.
- Arora, K and Dasgupta, H. 1977. **Second National Survey of Teacher Education at Elementary Level**. New Delhi: National Council of Educational Research and Training.
- Avalos, B. 1980. 'Teacher Effectiveness: Research in the Third World—Highlights of a Review.' **Comparative Education**. 16, 1, 45-54.
- Bhagia, N.M. 1981. 'Training Needs of School Principals.' *Journal of Indian Education*, 12-13.
- Bhagia, S. 1982. 'Some Thoughts on In-service Education.' **New Frontiers in Education**. New Delhi. National Institute of Educational Planning and Administration.
- Bhatnagar, T.N.S. 1983. 'Student Teaching and Other Practical Work in the B.Ed. Programme in India: Review of Studies and Literature.' **Indian Educational Review**. No. 3, 17-33.
- Chaudhri, M.M. 1986. 'India: From SITE to INSAT.' **Media in Education and Development**. 19, 3, 134-140.
- Chaudhuri, S.C. 1985. **Socially Useful Productive Work in Secondary Teacher Education**. New Delhi. National Council of Educational Research and Training.
- Coldevin, G. and Amundsen, C. 1985. 'The Use of Communication Satellites for Distance Education: A World Perspective.' **Canadian Journal of Educational Communication**. 14, 1, 4-5, 20-23.
- Cropley, A.J. 1981. 'Lifelong Learning: A Rationale for Teacher Training.' **British Journal of Teacher Education**. 7, 1, 57-69.
- Deve Gowda, A.C. 1973. **Teacher Education in India**. Bangalore. Bangalore Book Bureau.
- Goad, L.H. 1984. **Preparing Teachers for Lifelong Education**. Oxford. Pergamon Press.
- Goyal, J.C. (n.d.). **The Indian Teacher Educator: Some Characteristics**. Raia Mandi Agra. Bhargava Book House.
- Government of India. 1984. Ministry of Human Resource Development. **National Policy on Education**.
- Government of India. 1986. Ministry of Human Resource Development. **Programme of Action**. New Delhi.
- Government of India, MHRD. 1987. 'Establishment of District Institutes of Education and Training.' Mimeo. New Delhi.
- Government of India, MHRD. 1987. **Programme for Improvement of Secondary Teacher Education Institutions**. Mimeo. New Delhi.

- Gupta, A.K. 1984. **Teacher Education: Current and Prospects**. New Delhi. Sterling.
- Gupta, R.K and Dave, D.N. 1979. **Organization of Core Training Programme Package**. New Delhi: National Council of Educational Research and Training.
- Jangira, N.K.1982. 'In-service Primary Teacher Education in India.' **Journal of Indian Education**. 7(6), 16-24.
- Joint Innovative Project on In-service Primary Teacher Education. 1981. **In-service Primary Teacher Education in Asia**. Bangkok: Unesco. APEID.
- Joyce, B. and Showers, B. 1985-86. 'Teacher Education in India: Observations on American Innovations Abroad.' **Educational Researcher**. 14, 3-9; 15, 19-21.
- Khan, M.S. 1983. **Teacher Education in India and Abroad** . New Delhi. Ashish Publishing House.
- Khosla, D.N. 1970-71. **Innovative Practices in Teacher Education in India at the Secondary Level: Vol. I and II**. New Delhi. National Council of Educational Research and Training.
- Lipkin, J.P.1970. **Secondary School Teacher Education in Transition**. New Delhi. Asia Publishing House.
- Nagpure, V.R. and Inamdar, S. (et al.) 1986. **Teacher Education in Maharashtra (India)**. Maharashtra. State Council of Educational Research and Training.
- National Council of Educational Research and Training.1985. **National Curriculum for Primary and Secondary Education: A Framework**.
- National Council of Educational Research and Training. 1986. **Teacher Education in India**. Mimeo. New Delhi.
- National Council of Educational Research and Training. 1986. **Development of Education: National Report of India**. New Delhi.
- National Policy on Education: Programme of Action**. 1986. New Delhi. Department of Education, Government of India.
- Nirmal, S. 1983. **Education under Siege: A Sociological Study of Private Colleges**. New Delhi. Concept.
- Paliwal, M.R.1985. **Teacher Education on the Move: A Global View—Today and Tomorrow**. New Delhi. Uppal.
- Parekh, K. and Mankodi, H.1982. **In-service Training Programme for Teachers of Young Children: Guidelines**. University of Baroda (India).
- Patel, G.H. 1980. **An Investigation to Study the Attitude of Teacher Education towards the Programme of Non-formal Education Leading to Lifelong Education in the State of Gujarat**. Baroda University.
- Perrott, E. and Padma, M.S. 1981. 'International Transfer of a Self-instructional Teacher-training Course from Britain to India.' **Educational Broadcasting International**. 14, 46-48.
- Rokade, V.S. and Anarase, S.A.1983. 'Review of the Existing Arrangements of Pre-service and In-service Training for Teachers and Suggestions for Improvement.' **The Education Quarterly**.
- Ruhela, S.P. 1970. **Sociology of the Teaching Profession in India**. New Delhi. National Council of Educational Research and Training.

- Sabharwal, N. 1979. ***Innovative Practices in Elementary Teacher Education Institutions in India. Vol. 1.*** New Delhi. National Council of Educational Research and Training.
- Sabharwal, N. 1981. ***Studies and Investigations on Teacher Education in India (1973-1975).*** New Delhi. National Council of Educational Research and Training.
- Shah, B.V. 1969. ***The Role of the Secondary Teacher: A Sociological Investigation.*** New Delhi. National Council of Educational Research and Training.
- Shah, J.H. 1985. 'An Evaluation Tool for a Teacher-Educator.' ***Conference Proceedings of the World Assembly of the International Council on Education for Teaching*** Canada. July 22-26.
- Shankar, U. 1984. ***Education of Indian Teachers.*** New Delhi. Sterling Publishers.
- Shukla, S. and Singh, A. 1986. ***Teacher Education in India.*** New Delhi. National Council of Educational Research and Training.
- Singh, R.P. 1980. ***Studies in Teacher Education: An Overview.*** New Delhi: Bahri Publishers.
- Srivastava, B.K. 1984. ***Theory and Practice of Teacher Education in India.*** Allahabad: Chugh.
- Subbarao, C.S. and Bhatnagar, S.T.N.S. 1978. ***Secondary Teacher Education Curriculum.*** New Delhi: National Council of Educational Research and Training.
- Japan
- Casassus, B. 1984. 'Bill Sets out to Fold up the "Paper Teacher".' ***Times Educational Supplement.*** 3541: 16, May 11.
- Ferguson, P. 1985. 'Teacher Education in Japan: An Historical and Comparative Perspective.' ***Journal of Teacher Education.*** 36: 20-24, Sept./Oct.
- Ishigaki, E. 1980. ***How Do We Educate Teachers for Early Childhood Education: Early Childhood Educators in Japan.*** International Congress on Early Childhood Education (Israel, January 6-10).
- Iwaki, H. and Hamano, Y. 1985. ***Interface Between Education and Communication: Japan.*** APEID. Unesco ROEAP.
- Kamidara, H. 1982. ***The New Teachers' Training Programme at Hyodo University of Teacher Education.*** National Institute for Educational Research. Occasional Papers: Tokyo.
- Kida, Hiroshi. 1986. 'Educational Reform in Japan.' Unesco ROEAP. ***Bulletin.***
- Maki, M. 1986. ***Teacher Education in Japan.*** Tokyo: National Institute of Educational Research.
- Okano, Kaori. 1987. 'Teacher Education Policy Proposals for the 1980s in the North and South Pacific: Australia and Japan.' ***South Pacific Journal of Teacher Education.*** 15 (1): 64-80, April.
- Okihara, Y. 1986. 'The Wide-ranging Nature of the Japanese Curriculum and its Implications for Teacher Training.' ***Comparative Education.*** 22 (1): 13-18.
- Research Institute for Higher Education. 1985. ***Changing Functions of Higher Education: Implications for Innovation.*** Hiroshima University.
- Yoshida, A. 1986. ***Expected Style of Pre-service Programmes for Teachers: Objectives, Content, Methods and Educational Innovation in Japan.*** Honolulu: National Science Education/Japan Society for the Promotion of Science.

Republic of Korea

- Byun, H.K (et al.) 1986. ***Education and Policy Three: Interface between Education and State Policy: Redesigning Teacher Education Policies in the Context of a Preferable Future in the Republic of Korea.*** Barnan-Unipub.
- Byun, H.K (et al.) 1985. ***Interface between Education and State Policy: Redesigning Teacher Education Policies in the Context of a Preferable Future*** Bangkok: Unesco ROEAP
- ..
- Economic Planning Board. 1986. ***National Budget and Educational Finance.*** Seoul: Economic Planning Board.
- Ha, In Ho (et al.) 1983. ***Operation and Practice of Programmes for the Candidates for Educational District Directors.*** Seoul: National Institute of Educational Research and Training.
- Ha, In Ho (et al.) 1985. ***A Study on the Development of Teaching-Learning Systems within In-service Education for Educational Administrators.*** Seoul: National Institute of Educational Research and Training.
- Ha, In Ho; Kim, S.J; Lee, K.H. 1986. ***Survey of Teacher Education—Republic of Korea.*** Seoul: National Institute of Educational Research and Training.
- Han, Jong Kyoo. 1985. ***Formation and Operation of Curriculum in Graduate Schools of Education.*** Taejon: Graduate School of Education of Chungnam University.
- Hwang, Eung Yeon. 1985. 'Teacher's Careers and Employment.' ***Journal of Korean Teacher Education.*** Vol. 2.
- Jung, Won Sik (et al.) 1984. ***Development of Teacher Education in Korea.*** Seoul: Korean Educational Development Institute.
- KEDI. 1984. ***Educational Indicators in Korea.*** Seoul: Korean Educational Development Institute.
- KFEA. 1976. ***A Study on In-service Education.*** Policy Study No. 21. Seoul: Korean Federation of Education Associations.
- KFEA. 1982. ***An Analytical Study on the Teaching Load of Teachers.*** Policy Study No. 21. Seoul: Korean Federation of Education Associations.
- KFEA. 1983-1984. ***Improvement of Educational Personnel Administration.*** Seoul: Korean Federation of Education Associations.
- KFEA. 1983. ***A Research on Teachers' Recognition towards the Teaching Profession.*** Seoul: Korean Federation of Education Associations.
- KFEA. 1984. ***Statistical Yearbook of Korean Education, 1969-1984.*** Seoul: Korean Federation of Education Associations.
- Kim, Jong Suh (et al.) 1970. ***A Study on Teacher Education Systems.*** Policy Study No. 10 (Dec.). Seoul: Korean Federation of Education Associations.
- Kim, Ok Whan. 1981. ***Teacher Education in General Colleges.*** Sae Kyoyug. Vol. 326 (Dec.). Seoul: Korean Federation of Education Associations.
- Kim, Youn Tae (et al.) 1984. ***Teacher and Teachers' Society.*** Seoul: Paeyong-sa.
- Kim, Young Sik (et al.) 1982. ***An Ideology and the Current Situation of Educational System.*** Seoul: Educational Science Publishing Co.

- Kong, Eun Bae (et al.) 1984. **Optimum Size of School and Class**. Seoul: Korean Educational Development Institute.
- KRIYC. 1982. **Korean Education in 2000's**. Seoul: Korean Research Institute for Youths' Culture.
- KTESA. 1984. 'Advancement of Education and Development of Teachers.' **Journal Korean Teacher Education**. Vol. No. 1.
- KTESA. 1984. **An Exploratory Study of Comprehensive Alternatives for the Settlement of Teacher Education System**. Seoul.
- Lee, Don Hee. 1986. **Development Directions of Education of Teachers' Colleges**. Seminar Report on the Development of Teacher Education in Korea. Taejon: Chungnam University.
- Lee, Jong Lok. 1986. **A Comprehensive Study of the Curriculum of Graduate Schools of Education**. Iri: Graduate School of Education of Won Kwang University.
- Lee, See-Jae and Keiko, Sakurai. 1987. 'Political Economy of Education: A Case Study of the Republic of Korea.' Paper presented to the Unesco Regional Research Seminar on Perspectives on Asia's Futures. Bangkok.
- Lee, Young Duk. 1972. **Demand and Supply Plan for Elementary and Secondary School Teachers, 1972-1986**. Seoul: Korean Educational Development Institute.
- MOE. 1984. **Long-term Plan for the Supply of and Demand for Secondary School Teachers**. Seoul: Ministry of Education.
- MOE. 1970-1985. **Statistical Yearbooks of Education**. Seoul: Ministry of Education.
- MOE. 1984. **Reformation of Korean Education for the 1980s: White Paper for Educational Administration**. Seoul: Ministry of Education.
- MOE. 1984. **Revised Plans in the Education Sector of the Fifth 5-year Plan for Economic and Social Development**. Seoul: Ministry of Education.
- MOE. 1985. **Education in Korea**. Seoul: Ministry of Education.
- Nam, Ueok Woo. 1983. **Quality Management of Teacher Education Curriculum**. Administration of MOE (Jun). Seoul: Ministry of Education.
- NIERT. 1986. **A handbook of Retraining**. Seoul: National Institute of Educational Research and
- Pak, Dok Kyu (et al.) 1983. **A Study on the Improvement of the Teacher Certification System**. Seoul: Korean Educational Development Institute.
- Pak, Dok Kyu (et al.) 1985. **Teacher Education in Advanced Countries**. Seoul: Educational Research Publishing Co.
- Ro, Jong Hee and Hahn, Kil Man. 1982. **Improving In-service Education of Teachers: Directions and Tasks for Development**. Seoul: Korean Educational Development Institute.
- Suh, Chung Wha (et al.) 1981. **Exploration of Policy Directions for the Improvement of Educational Personnel in Administration**. Seoul: Korean Educational Development Institute.
- Sung, Chick Hong. 1987. 'Korea in the Year 2000.' Paper presented to the Regional Research Seminar on Perspectives on Asia's Futures. Bangkok.

- Yoo, HakSoo.1986. **Development Directions of Graduate Schools of Education**. Taejon: Graduate School of Education of Chungnam University.
- Youn, Jong Gun. 1982. **A Basic Study on the Improvement of In-service Education for Teachers**. Seoul: National Institute of Educational Research and Training.
- Young, W.K 1985. 'Changes in the Teacher Training System in Korea.' **East West Education**. 6
(1), 9-19.
- Yun, Chun Il. 1979. **The Expansion of Opportunities for Higher Education and Quality Control**. Seoul: Korean Educational Development Institute.
- Yun, Chung Il; Kang, Moo-sub; Chung, Il-hwan; Kim, Jae-woong.1985. **Korean Education 2000**. KEDI.
- Yun, Hyung Won. 1985b. **Historical Review of the Development of Teacher Education in Korea**. Seoul: Teacher Education Study Association.
- Yun, Hyung Won.1984. 'Improvement of Teacher Education Systems and the Demand-Supply Policy.' **Sae Kyoyug**. 362 (Dec). Seoul: Korean Federation of Education Associations.
- Yun, Hyung Won.1985a. **A Study of Development Strategies in the Graduate Schools of Education** . Taejon; Graduate School of Education of Chungnam University.

Malaysia

- Ali, S. Husin; Chang, Yii Tan; Tan, Boon Kean. 1987. 'Reflection on World Problems and Future-oriented Studies: Case Study of Malaysia and Singapore.' Paper presented to the Unesco Regional Research Seminar on Perspectives on Asia's Futures. Bangkok.
- Amir, Awang.1981. 'Teacher Education and Bahasa Malaysia: Problem and Prospect: National Language as a Medium of Instruction.' Papers presented at the Fourth Conference of the Asian Association on National Languages (ASANAL). Kuala Lumpur: Dewan Bahasa dan Pustaka, Kementerian Pelajaran Malaysia.
- Bahagian Pendidikan Guru, Kementerian Pelajaran Malaysia.1982. **Pendidikan Guru: Terbitan Khas Sempena Perayaan Jubli Int.an**. Kuala Lumpur: AFFA Sdn. Bhd.
- Bahagian Pendidikan Guru, Unit Kurikulum. 1982. **Latihan Perguruan Asas Tiga Takun**. Curriculum Unit, TED. 1982. Mimeo.
- Bahagian Pendidikan Guru, Unit Latihan dan Kemajuan Staf. 1984. **Laporan Takunan 1983**. Staff Development Unit, TED. Mimeo.
- Bahagian Pendidikan Guru, Kementerian Pelajaran Malaysia. 1985. **Laporan Takunan 1984**. TED. Mimeo.
- Bahagian Pendidikan Guru, Kementerian Pelajaran Malaysia. 1986. **Laporan Takunan 1985**. TED. Mimeo.
- Bahagian Pendidikan Guru, Unit Kurikulum. 1985. **Latihan PerguruanAsas Mengikut Semester**. Curriculum Unit, TED. Mimeo.
- Bahagian Pendidikan Guru, Unit Kurikulum. 1985. **Pelaksanaan KBSR di Maktab-Maktab Perguruan Malaysia: Satu KajEan**. Curriculum Unit, TED. Mimeo.
- Bahagian Pendidikan Guru, Kementerian Pelajaran Malaysia. 1985. **Anggaran Belanja Mengurus, 1986; Pengurusan Latiham dan Kursus Dalam Perkkidmatan**. TED. Mimeo.

- Bahagian Pendidikan Guru, Unit Kurikulum. 1986. **Latihan Perguruan Asas Lima Semester**. Curriculum Unit, TED. Mimeo.
- Bahagian Pendidikan Guru, Unit Peperiksaan. 1986. **Kajiselidik Benilaian Kerja Kursus, Kursus Perguruan Asas Tiga Takun**. Examination & Evaluation Unit, TED. Mimeo.
- Bahagian Pendidikan Guru, Kementerian Pelajaran Malaysia. 1986. **Anggaran Belanja Mengurus, 1987: Pengurusan LatEhan dan Kursus Dalam Perkhidmatan**. TED. Mimeo.
- Bahagian Pendidikan Guru, Unit Latihan dan Kemajuan Staf. 1986. **Cadangan Melanjutkan Rancangan Kursus Perguruan Asas Dalam Masa Cuti Baga Guru-guru Sandaran Tanpa Latihan**. Staff Development Unit, TED. Mimeo.
- Chelliah, T. 1981. 'Training of Teachers with a Science or Humanities Background for Environmental Education—A Malaysian Case Study.' **Environmental Education and Information**. 1 (2): 95-107, April-June.
- Choo, Piang Fong (et al.) 1984. **Guru-guru Siswazah USMMenghadapi Tugas**. Pusat Pengajian Ilmu Pendidikan, Universiti Sains Malaysia.
- Education Planning and Research Division, Ministry of Education, Malaysia. 1986. **Information Malaysia, 1986 Yearbook**. Kuala Lumpur: Berita Publishing Co.
- Educational Planning and Research Division, Ministry of Education, Malaysia. 1985. **Education in Malaysia**. Kuala Lumpur: Pelangi Indah.
- Kementerian Pelajaran Malaysia. 1979. **Laporan Jawatankuasa Kabinet Mengkaji Pelaksanaan Dasar Pelajaran**. Kuala Lumpur: Dewan Bahasa dan Pustaka.
- Kementerian Pelajaran Malaysia. 1982. **Buku Panduan Am Kurikulum Baru Sekolah Rendah**. Johor Bahru: Japatan Percetakan Negara.
- Kementerian Pelajaran Malaysia. 1982. **Kurikulum Baru Sekolah Rendah**. Ipoh: Japatan Percetakan Negara.
- Kerajaan Malaysia. 1966. Rancangan Malaysia Kelima 1986-1990. Kuala Lumpur: Japatan Percetakan Negara.
- Kerajaan Malaysia. 1981. Rancangan Malaysia Keempat 1981-1985. Kuala Lumpur: Japatan Percetakan Negara.
- Lloyd, A.P. 1985. 'Teacher Salaries and Dualistic Teacher Education in Malaysia.' **Journal of Teacher Education** 36: 25-28, Sept./Oct.
- Malaysia, Ministry of Education. 1981. **Joint Innovative Project on In-service Primary Teacher Education**. Kuala Lumpur: Teacher Training Division and Curriculum Development Centre.
- Malaysia, Ministry of Education. 1982. **Report on the Survey of Philosophy of Teacher Education in Malaysia**. Kuala Lumpur: Teacher Training Division.
- Manwaring, G. 1981. 'Training and Education of Teachers in Higher Education in Developing Countries.' **Higher Education**. 10: 131-140, March.
- Ministry of Education, Malaysia. 1986. **ASEAN Development Education Project: Teacher Education Reform**. Kuala Lumpur: Pelangi Indah.

- Mohd Noor, Abdullah. 1986. 'A Study of National Education Policy Regarding Teacher Education at the University Level in Malaysia from 1963 to 1984: Change and Development.' Unpublished Ph.D Thesis. Indiana University.
- Mukherjee, G.H. 1980. 'Moral Education and the Teacher Training Programme.' *Pendidik dan Pendidikan*. 2 (1): 46-53, Jan.
- Parkins, G. 1984. 'Malaysia to Take Tough Drop-out Line.' *Times Educational Supplement*. 622:8, Oct. 5.
- Parkins, G.1984. 'Moves to Solve Serious Shortage of Teachers.' *Times Educational Supplement*. 3559: 23, Sept. 14.
- Parkins, G. 1984. 'Teacher Training Improved as Fine Is Revoked.' *Times Higher Educational Supplement*. 631:11, Dec. 7.
- Parkins, G.1985. 'Building Boost for Teacher Training.' *Times Educational Supplement*. 3611 :22, Sept.
- Pusat Pengajian Ilmu Pendidikan, Universiti Sains Malaysia. 1986. *Laporan Penyelidikan Latihan Mengajar, 1985* . Pulau Pinang: Universiti Sains Malaysia.
- Sarjit Singh, Jasbir. 'A System Approach to National Development and Educational Reform.' 1981. *Pendidik dan Pendidikan*. Jld. 3, Bil. 1, January.
- Siong, Shee Tit. 1982. 'Predicting the Teaching Practice Performance of Prospective Mathematics Teachers by Their Selected Behaviour Characteristics.' *Pendidik dan Pendidikan*. 4 (1): 27-37, Jan.

Republic of Maldives

- Institute for Teacher Education. *Handbook 1986*. Male.
- Ministry of Education. 1986. *Recommendations of the National Conference on Education, 22-24 January 1985*. Male: Republic of Maldives.
- Ministry of Education. 1985. *Educational and Human Resource Development Plan 1985-1995*. Male: Republic of Maldives.
- Republic of Maldives. 1985. *National Development Plan 1985-1987, Vol. 1*. Male: Ministry of Planning and Development.
- Unesco, 1988. *UNESCO Activities in Maldives*. National Commission for Unesco/Ministry of Education: Male.

Nepal

- Belbase, L.N. 1985. 'The Training of Facilitators in Nepal.' *Convergence*. 18 (3/4): 119-122.
- Butterworth, B. (et al.) 1983. *Final Evaluation Report: Radio Education Teacher Training Programme*, USAID Project No. 367-0123.
- CERID. 1986. *Education for Rural Development in the Seti Zone: An Evaluative Study*. Tribhuvan University: Kathmandu.

- CERID. 1986. **Education of Girls and Women in Nepal: Report of an Evaluative Study.** Tribhuvan University: Kathmandu
- Education in Nepal.** 1956. Kathmandu: College of Education.
- Educational Statistical Data.** 1985. Kathmandu: Ministry of Education and Culture. (unpublished)
- Enrolment Targets for 1985-1990.** 1985. Kathmandu: Institute of Education, Dean's Office.
- Evaluation Study Report of Education of Girls and Women in Nepal.** 1986. Kathmandu: Centre for Educational Research, Innovation and Development (CERID), Tribhuvan University.
- Gorkhapatra.** April 4, 1985.
- Institute of Education. 1985. Assignment Records. Kathmandu: Institute of Education.
- Ministry of Finance. 1965-1988. **Budget Speeches.** Kathmandu: Ministry of Finance.
- Karmacharya, D. M. (et al.) 1975. **Development of a Field-oriented Sequence in the Primary Teacher Training Programme: An Action Research Project.** Kathmandu: Institute of Education, Tribhuvan University.
- Karmacharya, D. M. and Rajbhandari, Pramila. 1985. **A Diagnostic Study on the Management of Teacher Education Programmes: A Case Study Based on Kirtipur Multiple Campus.** Kirtipur Multiple Campus, Tribhuvan University.
- MOE. 1954. **Education in Nepal: Report of the Nepal National Education Planning Commission.** Ministry of Education.
- MOE. 1971. **National Education System Plan.** Ministry of Education: Kathmandu.
- MOE. 1973. **Teacher Education Workshop: Draft Report.** Institute of Education, Tribhuvan University: Kathmandu.
- MOE. 1987. **Programme for Fulfilling Basic Needs in Education.** Ministry of Education and Culture: Kathmandu.
- National Education System: Plan for 1971-1976.** 1971. Kathmandu: Ministry of Education.
- Nepal. Ministry of Education and Culture. 1985. **Training of Primary Education Personnel.** Lalitpur.
- Nepal. Research Centre for Educational Innovation and Development. 1983. **Performance of Trained and Untrained Teachers: A Comparative Study.** Kathmandu: Tribhuvan University, (CERID Newsletter, 5).
- Okwudishu, C.O. and Klasek, C.B. 1986. 'An Analysis of the Cost-effectiveness of Educational Radio in Nepal.' **British Journal of Educational Technology.** 17 (3): 173-185, Oct. (Radio Education Teacher Training Project).
- Report of the All-round National Committee on Education.** 1962. Kathmandu: Ministry of Education.
- Report of the Teacher Education Workshop.** 1972, Kathmandu: Institute of Education, Tribhuvan University.
- Shrestha, A.B. 1936. **Social-Personal Characteristics of Students Enrolled in Pre-vocational Teacher Education Programme.** Institute of Education, Tribhuvan University.

- Shrestha, A.B. and Vaidya. 1978. **A Case Study of the On-the-Spot. Teacher Training Programme.** Kathmandu: Institute of Education, Tribhuvan University.
- Shrestha, G.M.1986. **Primary Education Project:An Evaluative Study Report.** CERID. Tribhuvan University: Kathmandu.
- Shrestha, K.N. 1980. **Identification and Development of Training Needs in Educational Planning and Management for Nepal: A Research Report.** Kathmandu: Institute of Education, Tribhuvan University.
- Shrestha, KN. 1980. **Teacher Education in Nepal.** Tribhuvan University.
- Shrestha, K.N. and Malla, P. M. 1981. **A Study of the Effectiveness of the Extension Centre.** Kathmandu: Institute of Education, Tribhuvan University.
- Statistical Pocket Book 1984.** 1984. Kathmandu: Central Bureau of Statistics, National Planning Commission.
- Statistical Report (1972-78).** Institute of Education, Tribhuvan University.
- Suresh, R.J. (et al.) 1984. 'A Study of the Performance and Attitude of Trained and Untrained Teachers of Nepal.' **Education and Development.** Kathmandu: Centre for Educational Research, Innovation and Development (CERID) Tribhuvan University
- The Seventh Plan (1985-1990).** 1985. Kathmandu: National Planning Commission.
- Tribhuvan University. 1986. **A Survey of Teacher Education in Nepal.** Tribhuvan University. Kathmandu.
- UNICEF. 1985. **Teacher Education in Remote Places: Case Studies and Issues from Nepal.** Kathmandu.
- Wood, H. B. and Knall, B. 1962. **Educational Planning in Nepal and its Economic Implication.** Kathmandu. Ministry of Education.
- Yadava, M. 1986. **Development of Teacher Education in Nepal.** Am-Nepal Ed.
- New Zealand**
- Aitken, R. 1982. 'Curriculum Development and Teacher Education in New Zealand.' **JET. Journal of Education for Teaching** 8 (1): 76-87, Jan.
- Battersby, D. 1982. 'The Continuing Education of Beginning Teachers.' **NZTCA: Journal of the New Zealand Teachers Colleges Association.** 18 (39): 15-20.
- Beard, E. M. 1988. 'Report of a Teachers' Refresher Course on Children with Special Abilities in New Zealand.' **Gifted Education International.** 5 (2): 121-124.
- Cosson, L. 1981. 'Developing a Post-graduate Training Programme for Teachers of the Handicapped at Christchurch, New Zealand.' **Australian Journal of Special Education.** 5 (2): 26-29, Nov.
- Forrest, A.1981. 'Future Directions for Teacher Education. ' **NZTCA:Journal of the New Zealand Teachers Colleges Association.** 17: 2-5.
- Graham, R. 1987. 'Secondary Teacher Training Today.' **PPTA Journal.** No. 3: 10-12.
- Kings, B. 1980. 'New Directions in Teacher Education.' **NZTCA: Journal of the New Zealand Teachers Colleges Association.** 16 (1): 8-15.

- Martin, C. 1987. 'Centres of Excellence: New Zealand Programme for the Training of Teachers.' ***Journal of European Industrial Training***. Vol. 11, No. 1, p. 23-27.
- McGee, C. 1982. 'New Zealand Teachers' Colleges and the Continuing Education of Teachers.' ***South Pacific Journal of Teacher Education***. 10 (1): 57-62, April.
- McGee, C.F. 1982. 'SPRITE: An In-service Programme for Teaching Inquiry Skills.' ***NZTCA: Journal of the New Zealand Teachers College Association***. 18 (39): 26-30.
- McGrath, D. 1985. 'Relevant Theory and Practice.' ***PPTA Journal***. No. 3: 4-8.
- Middleton, S. 1981. 'A Multi-cultural Education Course in the Secondary Teachers' College.' ***NZTCA: Journal of the New Zealand Teachers Colleges Association***. 17: 6-9.
- Minogue, J.W.D. 1986. ***Hawaiian and New Zealand Teacher Education***. University of Hawaii Press.
- Whitwell, H.J. 1980. 'Whither Teacher Education?' ***NZTCA: Journal of the New Zealand Teachers Colleges Association***. 16 (1): 2-5.

Pakistan

- Akhtar, H. 1982. 'Prison Camp Converted to Teacher Unit.' ***Times Higher Education Supplement***. 509:7, Aug. 6.
- Farooq, R.A. 1985. ***Structure and Organization of National Education Institutions in Pakistan***. Islamabad: Academy of Educational Planning and Management.
- Khan, A.N. 1981. 'A New Model for Teacher Preparation in Pakistan.' ***Scientia Paedagogica Experimentalis***. 18 (2): 190-202.
- Klitgaard, R.E. (et al.) 1985. 'The Economics of Teacher Education in Pakistan.' ***Comparative Education Review***. 29:97-110, Feb.
- Klitgaard, R.E. (et al.) 1985. 'The Economics of Teacher Education in Pakistan.' ***Higher Education Review***. 230-236.
- Quasim, S.A. 1981. 'Reorganization for Teacher Education and Training.' ***ACEID Newsletter***. No. 22: 4-6, Oct.
- Rashid, M. 1982. 'Distance Teaching as a Vehicle of Non-formal Education in In-service Primary Teacher Training in Pakistan.' Ph.D. University of Wales.
- Sind (Pakistan). In-service Teacher Training Review Panel. ***In-service Teacher Training: A Situation Analysis in Sind Province: Report***. Karachi, 1980.

Philippines

- Bacungan, Cleofe M. 1983. 'Teacher Training for Science.' ***Educational Alternatives for the Future***. Quezon City: Phoenix Publishing House, pp. 100-134.
- Carson, A. L. 1978. ***The Study of Philippine Education***. New Day Publishers, Quezon City.
- Dagot, E.P. 1983. 'Suggested Patterns for Training the Apprentice Teacher.' ***Educational Alternatives for the Future***. Quezon City: Phoenix Publishing House, pp. 135-139.

- De Jesus, B. 1983. 'Teacher Education Programmes: Target of Innovation—An Overview.' **Educational Alternatives for the Future**. Quezon City: Phoenix Publishing House, pp.97-99.
- Dungo, N.G. 1983. 'Training for Teaching Skills: A Case Analysis of Innovation Pains.' **Educational Alternatives for the Future**. Quezon City: Phoenix Publishing House, pp. 154-177.
- Guiang, A M. 1987. **State of the Art of Technical Teacher Training: Philippines Country Paper**. Regional Workshop on Technical Teacher Training. Chiba City: Japan.
- Isidro, A. 1949. **Philippine Educational System**. Bookman, Manila.
- Manalang, Priscila.1984. 'Futures in Education: Philippine Response.' APEID ROAP. **Futures and Education**.
- MECS. **Annual Report**. 1982. Manila.
- MECS. **Statistical Bulletin**. 1982. Manila.
- Ministry of Education Culture and Sports (MECS). 1979. **Statistical Bulletin**. Manila.
- PAFTE. Report, 1982-1983. **Curriculum Redirection and Educational Reorientation Programme for Teacher Education**. Manila.
- PAFTE. Report, 1982-1984, **Baseline Research on Teachers and Teacher Education**. Manila.
- PAFTE. Report, 1982-1984, **Baseline Research on Teachers and Teacher Education**. Manila.
- Philosophy of Education Society of the Philippines.1985. Annual Convention 1984: De la Salle University. **Philosophy Foundations and Teacher Education: Philippines Context**. Manilla: UST. Press.
- Rosas, Nilo L. (n.d.) **Teacher Education. A Review of the State of the Art of Educational Research: The Philippine Experience**. PRODED. Ministry of Education, Culture and Sports.
- Rosas, Nilo L. 1983. 'In-service Teacher Education (ISTE): Its Present Status and Future Possibilities in the Philippines.' **Educational Alternatives for the Future**. Quezon City: Phoenix Publishing House, pp. 140-153.
- Sutaria, Minda C. 1987. **State of the Practice Review of Values Education in the Philippines**. SEARRAG.
- Teacher Education Assembly. 1982. **Anthology of Documents and Relevant Papers**.

Sri Lanka

- Annual Report of the Teachers Education Unit. 1985. Ministry of Education.
- Annual Reports of the Open University. 1985-1986.
- Annual Report. 1985-1986. University Peradeniya.
- Annual Report. 1986. University Peradeniya.
- Ariyadasa, KID. 1976. **In-service Training of Teachers in Sri Lanka**. Bangkok: Unesco.
- Central Bank of Ceylon. 1985. **Consumer Finances and Society**. Economic Survey 1982/1983. Colombo.

- Dharmadasa, K.M. 1986. **How Do the Distance Education Students Study the Module? A Survey**. Sri Lanka. Distance Education Unit. Ministry of Education.
- 'Distance Education in Asia and the Pacific' (various years). **Bulletin** of the Unesco Regional Office for Education in Asia and the Pacific. Unesco. Bangkok.
- 'Education in Ceylon.' 1969. *Literary*, Vol. III. Ceylon: Ministry of Education and Cultural Affairs.
- Ekanayake, S.B. 1978. **Teacher Training for Rural Schools in Sri Lanka**. Unesco. Bangkok.
- Ekanayake, S.B. 1980. 'Training Teachers for Changing Roles in Sri Lanka.' **Prospects**. 10(4): 504-511.
- Ekanayake, S.B. 1978. **Teacher Training for Community Development**. Sri Lanka. Evaluation Report. 1984. **UNDP/Unesco Evaluation Mission on Project for Quality Improvement of General Education**. Sri Lanka.
- Fernando, N. 1984. **Many Voices, Many Needs**. Sri Lanka: Ministry of Education.
- Gunawardhana, G.B. 1972. 'A Study of the Curriculum for Teacher Education in Ceylon.' M.A. Dissertation. (unpublished) Peradeniya University.
- Jawatha Education**. 1976. Report of the Seminar of Jawatha Education in Teacher Colleges in Sri Lanka. Ministry of Education.
- Jayasuriya, J.E. 1971. **Educational Policies and Progress, During British Rule, 1896-1948 in Ceylon**.
- Jayasuriya, J.E. 1971-1976. **Education in the Third World**. Somaliya Publishers-P.V.T., Ltd., Bombay. New Delhi.
- Jayasuriya, J.E. 1983. **The Teaching of Technical Subjects in Secondary Schools in Sri Lanka**. Colombo.
- Jayasuriya, J.E. 1987. 'Sri Lanka in the Year 2000.' Paper presented to the Unesco Regional Research Seminar on Perspectives on Asia's Futures. Bangkok.
- Jayawera, S.; Loftstedt, J.I.; Little, A. 1984. **Human Resource Development in Sri Lanka: An Analysis of Education and Training**. Education Division. Document No. 24, SIDA. March.
- Journal of the National Education Society of Sri Lanka**. 1983.
- Journal of the National Education Society of Sri Lanka**. 1985.
- Karunasena, L.N. and Sedara, M.U. 1983. **A Study of the Objectives of Teacher Education**. Research Report of University of Peradeniya.
- Kudaligama, P.K.D.P. 1983. **The Primary Teacher Education Programme in Sri Lanka**. UNICEF.
- 'Learning from the People.' **Journal of Education**. Sri Lanka: Ministry of Education.
- Marga Institute. 1982. **An Analytical Description of Poverty in Sri Lanka**. Colombo.
- Mendis, G. 1984. **Rural Vocational Training Needs in Sri Lanka**. Colombo: Sri Lanka Institute of Development Admission. (SIDA) Documentation Services. No. 2.
- Ministry of Education. 1979. **Towards Relevance in Education: Report of the Educational Reforms Committee**. 1979. Colombo.
- Ministry of Education, 1981. **Education Proposal for Reforms: General, University and Tertiary (Vocational Technical and Professional)**. Sri Lanka.

- Ministry of Education. 1984. **Projections and Teacher Requirements 1982-1986**. Colombo.
- Ministry of Education. 1985. **Implementation Programmes for 1985**. Colombo: Planning and Programming Branch.
- Ministry of Education. 1986. **Implementation Programmes for 1986**. Colombo: Planning and Programming Branch.
- Ministry of Education. 1986. **Plantation Sector Teacher Training Data**. Colombo.
- New Directions in Education**. 1985. Proceedings of the Motion Conference. Friedrich Naumann. Colombo.
- Parish, C. and Brown, R.W. 1988. 'Teacher Training for Sri Lanka: PRINSETT (Professional In-service English-Teacher Training).' **ELF Journal**. 42: 21-27, Jan.
- Premadasa, Udagama. 1983. **Training College**. Ministry of Education.
- 'Provision for Learning in a Community.' 1986. Research paper. Ministry of Education, Sri Lanka. Unesco.
- Silva, E.J. 1984. **Report on Implications for National Implementation of the Like Skills Curriculum**. Colombo: UNDP/Unesco.
- University Grants Commission. 1984. **Co-operate Plan for University Education 1984-1988**. Colombo.
- Wijetunga, Swarne. 1980. 'Training and Continuing Education Needs of the Diploma in Education: Students at the University of Colombo.' Ph.D. Dissertation. Columbia University.
- ## Thailand
- Browne, G. 1980. 'Current Developments in Teacher Education in Thailand.' **Education, Planning and Process in a Rural Society**. Papers presented at the seventh annual conference of the Australian Comparative and International Education Society Brisbane: Mt. Gravatt College of Advanced Education. pp. 145-1710.
- Champatong, S. 1980. 'Curriculum Reform: Implications for In-service Education in Thailand.' **Contemporary Education**. 51:206-209, Summer.
- Chewprecha, T. 1980. 'Comparison of Training Methods in Modifying Questioning and Wait-time Behaviours of Thai High School Chemistry Teachers.' **Journal of Research in Science Teaching**. 17: 191-200, May.
- Karnphanit, P. 1985. **A Study of the Implementation of the IPST Inquiry-oriented Lower Secondary Science Curriculum in Thailand**. (Unpublished Ph.D. Thesis.) University of Illinois.
- Kindervatter, S. 1985. 'How Thai Village Women Became Adult Educators.' **Convergence**. 18 (3/4): 116-119.
- National Seminar on Teacher Education Reform: Bangsaen**. 1981. Chonburi, December 24-27. Bangkok: ASEAN Development Education Project, 1981.
- Saiyud, C. 1988. **Financing and Managing of Teacher Education: A Case Study of Thailand**. Bangkok: Ministry of Education.

Somboon, Suksanguan. 1983. 'Traditional Performing Arts in the Teachers' Training Colleges of Thailand.' (SEAMEO Project in Archaeology and the Fine Arts.) **Final Report Sor the Traditional Dance and Dance Drama**. Bangkok: Southeast Asian Ministers of Education Organization, pp. 193-200.

Unesco/UNDP. 1984. **Thailand: Educational Teacher Education: Programme Development: Project Findings and Recommendations**. Paris.

Waters, A. 1988. 'Teacher-training Course Design: A Case Study.' **ELTJournal**. 42: 14-20, Jan.

Wilawan, Charanyanda. 1980. **The Relationship of Attitudes towards Population Education, Quality-of-life Beliefs, and Professional Commitments of Thai Home Economics Teacher Educators**. Singapore: SEAPRAP.

Wuthisen, S. 1984. **The Teacher Training Regional Network of Educational Innovation: A Qualitative Study of an In-service Teacher Training Programme in Northeast Thailand**. (Unpublished Ph.D. Thesis.) Florida State University.

Western Samoa (and Other Pacific Islands)

APIA 1986. **Educational Policy and Development; Looking towards the 1990s**. Western Samoan Department of Education.

Baba, Tupeni L. 1986. 'Education in the Pacific Islands.' Unesco ROEAP. **Bulletin**.

Biles, J.; Low, B; Dunkley, M. (eds.) 1981. **Aims of Education for Western Samoa**. Sydney: Macquarie University. Mimeo.

Singh, G. 1985. **Primary Teacher Training Needs in Fiji**. Unesco Office for the Pacific States. Mimeo.

Thaman, K.1985. **Primary Teacher Training Needs in Tonga**. Unesco Office for the Pacific States. Mimeo.

Unesco. 1987. **National Training Workshop on the Adaptation of Initiatives and Innovations in Teacher Education in Western Samoa: A Report on Hews and Recommendations**. Western Samoa: Department of Education. Mimeo.

