

Part 1

General and Caribbean overview

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Issues and developments in teacher education in Commonwealth and other countries

A major concern which affects the performance of teachers has to do with the relevance of teacher training programmes to the reality of the classroom situation.

(The future of education in the Caribbean, CARICOM Secretariat, 1993)

Introduction

All the key issues discussed in this paper are likely to arise in most countries whether they be member states of the Commonwealth or not. However, as this is a paper which specifically focuses on teacher education and teacher development in the Commonwealth, most of the examples cited in the discussion will arise from member states located in Africa, Asia, Australasia and the northern hemisphere as well as the Caribbean. At times, reference will be made to countries outside the Commonwealth where developments in teacher education have influenced some aspects of teacher training in the Commonwealth. New styles of teaching, new concepts about the role of teachers, challenging new concepts of teaching cultures, and school-based teacher training are among the areas which research and innovation in America, Europe and some Latin American countries have produced.

The present paper will be confined to the education and training of primary and secondary school teachers. Reference to developments in distance education will be made in passing as these are dealt with by specialists elsewhere in this volume.

The underlying thesis of this chapter is that to improve the quality of teaching and learning in schools, it is necessary to have an holistic approach to the education and training of teachers. This approach has to take into account the nature and organisation of teacher education, the long-term prospects for the professional development of teachers and their role as innovators and classroom researchers.

Recent research originating from both quantitative and qualitative studies, together with case study and secondary data sources, will form the main basis for ideas put forward in this paper. Many of these sources were researched by the author and some of his research students who have had direct experience in developing countries in the Commonwealth and elsewhere.

Teaching will be viewed as a process which involves both learner and teacher in an interactive and often continuous process resulting in changes in cognition and socialisation. Teacher education will be defined as a process of life-long training and personal development, during which teachers and teacher educators are exposed to new ideas and practices with the ultimate aim of improving their self-esteem and professionalism.

The paper will seek to answer three key questions:

- What is the background to the emergence of key issues in teacher education?
- What are the key issues that need to be identified which are likely to influence the quality of teacher education into the next millennium and how are they to be tackled?
- What role do international comparisons have in improving teacher education?

The emergence of issues

It is important at the start of a paper that is concerned principally with the subject of issues, and one which is about as complex and dynamic a field as international teacher education, to establish as far as possible the main factors that allow one set of issues to emerge over another. It is also important to ask who it is that decides that a particular issue needs to be considered and for what reasons. There are four main factors that may influence the way issues surface not only in teacher education but in education per se, namely: the process of change; innovation and technological advances; globalisation and mass communication; and human needs.

1 The process of change

This process originates from several sources:

- Socio-political changes can easily be overlooked by educationists in their zeal for improving the quality of teaching and learning.
- Economic factors form an important source of change. These include at least two scenarios. Firstly, there are countries which lack sufficient funds to finance the most basic needs for the training of teachers. Secondly, there are countries whose economies are vibrant and growing but which have difficulty in making decisions about what they can afford and are not certain the changes are relevant.
- Cultural factors are another source of change; one which is slower in its impact when compared to political and economic changes. The rate of cultural change is determined principally by the amount of resistance or acceptance displayed by a particular group.
- Changes in the content and processes of education have been both massive and challenging over the last twenty years. These changes have presented educational policy-makers with difficult decisions. Their task has not been made any easier by the present drive to provide not only better access to schooling, but also to improve the quality of that schooling significantly. Issues emerging from this source include making decisions about the use of computer technology in school, individualised learning, new modes of pupil and teacher assessment and the changing nature of knowledge and skills for the future.

2 Innovation and technological advances

The changes these technologies bring are beginning to have a decisive impact on the way pupils learn, teachers teach and educational managers manage and organise their day to day activities. While the majority of Caribbean countries are yet to feel this impact, there is a growing number of states in Asia

and a few in Africa and the Caribbean that are beginning to acquire this technology in their schools. Issues which have emerged as a result include the need for appropriate training of teachers in handling the technology, and also for careful planning to fit software appropriately into meaningful classroom learning.

Innovation does not only refer to educational technology but includes the use of alternative systems of teacher training which might involve distance education, mobile training, master teacher models and new styles of school management and administration.

3 Globalisation and mass communication

The impact which radio and television has, or has not had, on education is well documented and will not be discussed at any length here. However, it is necessary to point out that both radio and television have added significantly to the process of globalisation. These media, together with the increasing availability of the written word in many developing countries, have influenced education, be it through formal schooling or in its informal and non-formal modes. The more recent forms of rapid communication across the globe, such as the fax machine, E-mail (electronic mail) and the increasingly intricate developments arising from fibre optics, and the information highways, will have both positive as well as negative outcomes.

4 Human needs

Perhaps one of the most crucial of human needs as far as teacher education is concerned is the need to improve the quality of teachers. The need to improve teacher quality is at the heart of the process of teacher professionalisation. The issue of professionalisation is already a major policy issue in countries such as Canada, New Zealand, Australia and Britain.

The increasing role of INSET in the form of school-based activities has become a pivotal part of many countries' long-term policy on teacher education and training. In countries such as India, Sri Lanka, Malaysia and Singapore, where the teacher stock is reasonably sufficient, especially at the secondary school stage, improving teacher qualifications and exposing teachers through in-service courses to new ideas may soon be built into teachers' conditions of service.

Improvement and upgrading of teacher educators is another facet in the process of improving teacher quality. This is already a serious issue in many Commonwealth countries and is particularly acute at primary school level.

Key issues influencing quality of teacher education

The preceding section discussed how issues emerge in different situations and in different countries. What are issues in one country may not be so in another. For instance, language policy in Bangladesh is a relatively straightforward affair when compared to the situation in Malaysia or Sri Lanka. Providing adequately trained and experienced teacher educators is not such a burning issue in the United Kingdom and Australia as it is in the Caribbean and East African countries such as Kenya and Uganda.

As the issues are closely linked in this section of the paper to the concept

of quality, it is necessary to emphasise that like poverty, quality is a relative state and should always therefore be perceived in context. Quality in education may be seen as a meld between the best obtainable at a particular time and the highest aspiration in the future. Quality should never be seen as an absolute. It is a goal which is likely to change with time and within specific contexts, and, in the case of education, with the advantage of planned and often unplanned experiences.

From current information available in reports and other publications, and from recent research data collected by the author, it is possible to identify five kinds of issues, namely:

- philosophical and conceptual
- organisational and planning
- curricular
- professional
- research and evaluation.

1 Philosophical and conceptual issues

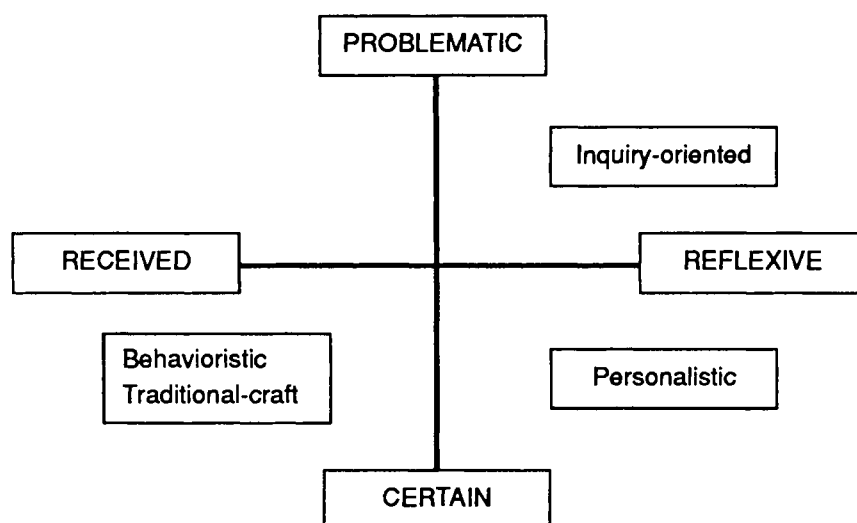
There has been a serious debate during the last decade or so about the outcomes of teacher education, especially in Australia, New Zealand and the United Kingdom. In the latter, some would say the debate was also a very bitter and acrimonious one. The crux of the problem is financial and professional accountability. Are teachers being trained sufficiently well to meet the changing demands of the world of work? It was perceived by some governments that most parents, many employers and a large body of the teaching profession felt that teacher education and training in the 1960s and 1970s had not delivered the basics that children need to have to function in an ever changing modern society.

The basics that seemed to be poorly catered for included reading, writing and numeracy. In addition it seemed that the aims and general philosophy underlying many educational systems had either fallen by the wayside or were too poorly defined to give a framework for the personal development of the teacher. We began to hear about non-effective schools and effective schools (Rutter, 1979, Mortimore and Sammons, 1987). The preoccupation in certain countries during the 1980s with consumer led change and market forces over-spilled into education and more recently into teacher education. The Competency Based Teacher Education (CBTE) movement that originated in America in the mid 1970s, began to emerge after a period of cold storage in most parts of the Commonwealth. The linking of behavioural objectives to outcomes, already a growing feature in many school curriculum subjects, had now finally reached the level at which teachers were trained.

It was the work of Zeichner on teacher education paradigms in the early 1980s which drew attention to the different polarities that exist in teacher education. The problematic-certain dimension illustrates that teaching needs to solve problems as well as present facts. The received-reflective dimension emphasises the need for teacher educators to train their students to think through their teaching on a regular basis, rather than to accept their tasks as part of the job of teaching; the 'thinking through' being an essential process in improving practice next time around. Figure 1 below shows the four dimensions or paradigms (Zeichner, 1983).

Zeichner's received-behaviouristic paradigm includes the CBTE mode I mentioned above. Personalistic teacher education is exemplified in

Figure 1 A summary of four paradigms of teacher education



(from Zeichner, 1983)

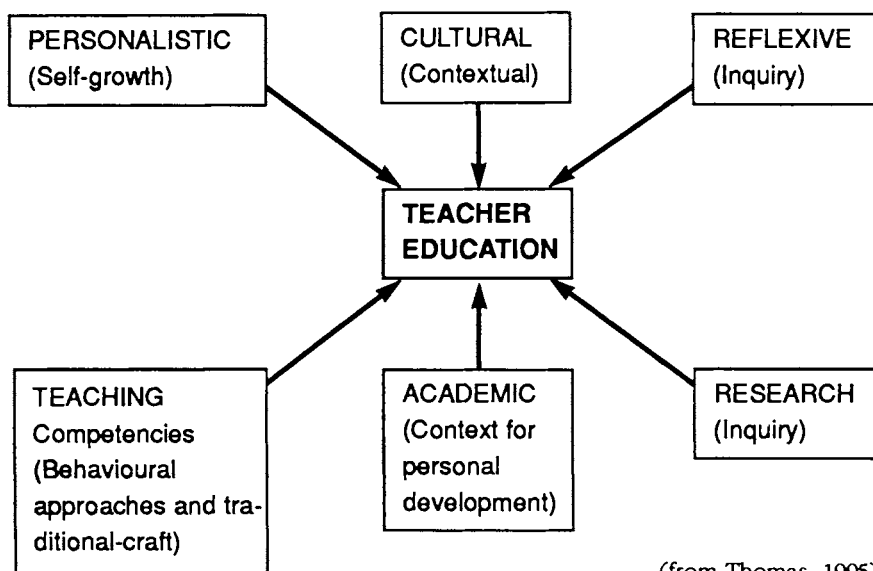
phenomenological epistemology and the principles of open education. Traditional-craft teacher education is based on learning through apprenticeship and the wisdom of experienced teachers (Floden and Lanier, 1979). Inquiry-oriented teacher education emphasises a reflective approach to teaching and also among teachers about their work (Dewey, 1933; Cruickshank, 1987; Schon, 1983).

When examining various teacher education programmes from different Commonwealth countries all four of Zeichner's paradigms were apparent and many more besides. There is a discernible trend in the majority of countries for a skill-based teacher education philosophy. This is understandable when there are undoubted pressures being exerted by parents and the world of work to equip school leavers with the skills and knowledge required for the work place. The danger is that skill-based training of teachers is not being balanced sufficiently, or at all in some instances, with the reflection advocated by those who support the inquiry-oriented approach to teacher education.

It is very important to establish a sound and clear philosophical rationale about why and how we train and educate teachers. To date, it would seem that more effort has been expended on training. However justifiable this may be, merely training teachers to carry out technical and mechanical skills without thinking about the *raison d'être* of educating children will increasingly impoverish the professional standing of teachers. To widen and emphasise this rationale, teacher education should pay attention not only to the four paradigms put forward by Zeichner but also to at least two more. Figure 2 below shows an extension by the author of the Zeichner model into a six paradigm structure, in which polarisation between paradigms is not a feature as all paradigms can play an important role in any teacher training programme.

These include cultural and academic contexts. The former enables teacher educators to pay particular regard to how the cultural context affects teaching and learning; the latter extends and reinforces the value and appeal of appropriate subject knowledge, thereby substantially assisting in the personal development of teachers. In this context, personal development means a teacher having an education (as opposed to having a training) which enables him or her to function intellectually above the level of the classroom.

Figure 2 Six paradigmatic approaches to teacher education



(from Thomas, 1995)

What is needed is the development of strategies which embrace appropriate elements from each of the four paradigms, and which also include certain culture-related pedagogies characteristic of different Commonwealth countries and the different groups within them.

2 Organisational and planning issues

Quantitative and qualitative reasons have been behind many of the past and present policies put forward by Commonwealth governments in the organisation of teacher education.

After the Second World War, countries such as the United Kingdom, Canada, New Zealand and Australia, had to meet a severe teacher shortage as a result of a sharp increase in population. In the United Kingdom, various emergency schemes such as six month or one year crash training schemes, were put into operation to meet the demand. The situation worsened as large numbers of children reached the age for primary school entry by the early 1950s.

At a later date, and for rather different reasons, the newly independent countries of the Commonwealth faced similar problems, as schooling was regarded not only as a human right but as a necessity for the future development of the countries.

The organisation of teacher education in the older Commonwealth countries tended to follow a conventional pattern of mainly college or university-based training lasting from one to three years. In the emergent Commonwealth countries such as Ghana, India, Pakistan, Kenya and countries of the Caribbean, the numbers of children enrolling for entry first to the primary stage and then the secondary were so great that alternative patterns of teacher training had to be developed to cope with the demand.

This meant that those involved with the organisation of teacher education looked at various models of training, which could be used under different circumstances and in various countries. These various organisational models included:

- sandwich schemes in Nigeria and Malawi
- cascade training in Bangladesh and Malaysia
- master teacher programmes in Pakistan and Kenya
- peer teaching in West Africa.

Mobile training and distance education have also been used in teacher education in Uganda and Zimbabwe and several Caribbean countries.

Parameters such as the rapid increase in the school population, teacher preparation time and scarce facilities for training were major reasons for setting up alternatives to conventional teacher education. It seemed that contraction or modification of the teacher preparation stage (the time parameter) was a key criterion for deciding which alternative would be the most suitable.

When examining the way teacher education has been organised to improve teacher quality, it is apparent that many ideas which were developed to improve the quantity of teachers have been retained either in a modified form or without any change at all. The master teacher idea is being used in Australia at the University of Macquarie as part of teacher preparation programmes. Distance education packages for training teachers in the United Kingdom through the Open University are not such a far cry from the Zimtec scheme operated in Zimbabwe. Mobile teacher training coupled with distance education packages are not only being used in East Africa for training unqualified primary school teachers, but are also contemplated for upgrading the quality of those teachers who have been in service for many years.

Teachers' centres

The original idea behind the setting up of teachers' centres was to improve the quality of teachers by setting up a local base where teachers who were in paid service could attend courses arranged by the local education authority. The centres also provided a resource service in the form of a small library and some teaching equipment and materials.

From an organisational point of view, teachers' centres could act as a mid-point between the schools' needs and the desire of employers for professional improvement during a teacher's service. The centres also gained much professional support from various teachers' associations. This concept was started in the United Kingdom but soon spread to many parts of the Commonwealth and became a means of not only providing in-service education, but also support for teacher preparation as in Kenya and Uganda. Teachers' centres, sometimes called teacher resource centres or teacher advisory centres, fell into disuse during the 1980s, mainly because of insufficient financial backing, inadequate professional support and poor physical upkeep. However, in the Gambia, Uganda, Kenya and more recently in the Cameroons, teacher resource centres are making a comeback. Many of the original buildings are still standing and, with the assistance of donor agencies, the centres are being refurbished and are being linked more effectively into national plans for both teacher preparation and in-service training.

From the above, it is clear that the way teacher education is planned and organised has a very crucial role to play in the overall attainment of quality teaching. It has become increasingly the case that the organisational strategies formulated to increase the number of teachers (the quantitative problem) contain features that can assist in solving qualitative problems. For instance,

distance education materials for increasing the capacity for primary school teacher preparation in Uganda, have proved to be more substantial and relevant than materials and methods used in the conventional college-based teacher training (Thomas, 1993).

It is worth mentioning here that the school as an organisational unit is being used more and more as a venue for both teacher preparation and in-service training. School-based PRESET and INSET are becoming the norm rather than the exception in several Commonwealth countries. In small island states in the Caribbean and the Pacific, and in the Maldives, school buildings have over the years acted as training centres for teachers in service (Lake, 1994). They are usually the secondary schools as they are generally larger and often better equipped. This use of schools is also apparent in various programmes to upgrade teacher education, such as in Anguilla (Lake, 1994), Montserrat (Fergus, 1994) and Vanuatu (Collingwood, 1991). In Australia and the United Kingdom, school-based teacher training has increased from between 14 per cent to 20 per cent of the total training period in the early 1980s, to between 40 per cent to 50 per cent in Australia and as much as 80 per cent in some cases in the United Kingdom by the 1990s. Several issues arise out of this:

- Do the headteachers and teachers have the appropriate training expertise?
- What time can they devote to the task of training?
- Do the schools have the equipment to undertake the costly role of training?

These are some of the unresolved questions on which there is at present no substantive data.

In any discussion on the organisation and planning of teacher education, mention should be made of teachers' pay and conditions of service. Problems arise when teachers are encouraged to improve their qualifications and enrich their experience through attendance at in-service courses only to find that there is little or nothing in the way of financial incentives. Unless there are clearly planned career pathways in place, linked to a system of fair rewards, there will be little motivation for teachers to improve themselves. In Singapore, there is an interesting system of incentives for all teachers. These are based on performance objectives assessed mainly by the heads of institutions and senior departmental staff as well as by staff self-appraisal. There are also clear career pathways, the promotional journey along which is dependent upon successful and effective service. This is linked to a system of monetary rewards and other professional compensations, such as paid leave for improved qualifications.

3 Curricular issues

It may be worth keeping in mind when discussing the teacher education curriculum, that there should be three fundamental aims in its organisation and planning.

- (i) The curriculum for teacher trainees should offer professional preparation that not only provides all the competencies necessary for operating in the classroom of today, but also the innovation and vision that should be a hallmark of the future.
- (ii) The curriculum for the training years should be targeted towards the personal and future career development of the trainee.

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- (iii) Teacher education should be planned within an holistic philosophy, so that all teachers, after their period of formal training, can engage in life-long teacher education.

All three aims are closely linked. Neglect of the first aim is very likely to result in the inability of the teacher to fulfil his or her role as a competent instructor and facilitator. Ignoring the second aim may result in teachers who are too task-oriented and who are likely to develop a narrow view of their role as professionals. Lack of vision concerning the third aim is a sure recipe for the development of a mundane, mediocre, unimaginative and non-reflective practitioner. The discussion that follows will be structured around the three aims outlined above.

Training for curricular competency, present and future needs

In examining the numerous curricula for pre-service training of primary and secondary school teachers in several Commonwealth countries, it has been found that the time devoted to training for the humanities, mathematics and science subjects invariably outweighs the time given to other educational disciplines and subjects like physical education (PE), civics and values education (Thomas, 1955b). The weighting of teaching subjects is always going to be greater than the supporting and optional areas of study. However, there is a need in all countries for a careful situational task analysis of all the subjects taught in the school curriculum at both primary and secondary school level. This task analysis will need to come to terms with current and future problems.

Current problems include:

- multi-grade teaching
- the challenge of values and moral education
- environmental health and welfare issues
- improving basic skills education.

Future problems, for some countries at least, will include coming to terms with the latest technology, such as personal computers at home and in school, and the latest innovations of multi-media products.

Multi-grade teaching

Turning to the current issues, the problems involved in training teachers for multi-grade situations are shared by many Commonwealth countries. Multi-grade schools are schools which combine students of different ages and different abilities in one classroom. In their investigation of the subject, Thomas and Shaw (1992) summarised a few key issues. These include making policy decisions about providing multi-grade schools as a cost-effective means of delivering schooling, developing an implementation strategy, and identifying building blocks which will assist the implementation process. It is clear from their analysis, that teacher support systems need considerable strengthening if multi-grade teaching programmes are to be successful. Thomas and Shaw also provide interesting arguments in support of multi-grade techniques being used in single-grade classrooms. There is much sense in this position, but to implement it teacher education programmes will have to be more adaptive and innovative in both the content and methodological parts of the curriculum.

Values education

An issue which has emerged over the last ten to fifteen years and shows no sign of abating, is the need for a meaningful, relevant and effective values education programme for primary and secondary schools. Where values education has received considerable attention as part of curriculum reform, planning and implementation, as in North and South Asia, there are still very substantive problems that remain unsolved (Thomas, 1992a, 1995). Amongst the most crucial of these are defining the nature, scope and classroom ethos for values education, especially in multicultural societies. A closely-related problem is the way teachers are trained to deal with the sensitivities of the subject of values education.

Role of personal computers

Turning to a more futuristic issue, although for some countries it is a current one, the role of personal computers in teaching and learning will need to be faced urgently. Learners are now faced not only with readily accessible encyclopedic knowledge, but also with the multi-modal possibilities that CD-Rom and other computer innovations are likely to bring. Along with these developments, there is the much wider access of children to personal computers in school and at home. It is likely that by the end of the millennium with miniaturisation aiding portability, and cheaper hardware, personal computers will be as common as a textbook or a calculator.

In preparation for this, the teacher will need to be trained increasingly as a facilitator, guide and advisor, as well as an instructor. Pedagogical training will need to select out knowledge, prioritise skills transfer, and analyse knowledge and skills into core principles and concepts. Some core concepts may be common across certain disciplines and others may be more subject specific. The teachers will need to be good at selecting knowledge and explaining its significance within a scheme of study guidance. This may be planned for a particular course of study which the learner accesses through a personal computer, and which may be used at home as well as in school.

To those countries which may perceive these problems as being some way off, it is worth pointing out that ten years ago, it would have been inconceivable that ministries of education in countries such as Sri Lanka, India and Bangladesh would now be using quite sophisticated computer technology to solve some of their problems with teacher supply and demand, distribution of salaries and monitoring conditions of service.

The changing nature of the world of work, and the need for different skills and attitudes, require that curriculum design and development should be based on the outcomes of a rigorous and on-going situational task analysis. This should be aimed at making what is taught in schools more relevant to the needs of a rapidly changing society.

Commonwealth countries that have not caught up with the impact of some of the new technologies have in many ways the advantage, for they are in a position to learn from the mistakes made by those countries who already have these innovations. Other points also need to be clarified concerning the use of modern technologies in the classroom.

- (i) It is highly unlikely that the profession of teaching will wane or disappear. In fact from what has been discussed above, the need for teachers seems to be even greater. However, the new technology does require a

reorientation of a teacher's role from being mainly instructor to being guide and advisor also.

- (ii) Using technology satisfies the need to learn, understand, develop critical and creative thinking, especially with the help of the teacher.
- (iii) No amount of modern technology can replace the vital role that teachers have in promoting values education and the need for teachers to empathise with and counsel their pupils.
- (iv) In societies that have strong cultural traditions, pursuing educational quality by making space only for modern ideas may spell success from a technological standpoint but impoverishment from a cultural one.

Training for personal development

The trend to devoting more time during initial teacher training to the practicum and less to the main subject study, and in some cases, even less on educational disciplines, raises serious issues about the 'personal development' of a teacher in training. While the extent of this trend varies from one country to another, it is discernible in the increased attention given to pragmatism and craft, and the decreasing focus on an academic and pedagogically scientific approach, which was a feature of teacher education in the 1960s and 1970s.

Much of the problem is linked to the need to develop meaning and relevance between theory and practice. The approach of Turney (1983) and others in Australia on the practicum curriculum, which used micro and macro-teaching methodologies to bridge the gulf between educational theory and practice, is an example of this. The so-called practicum curriculum was soon taken up by several teacher training faculties and institutes inside Australia and in Singapore and Malaysia (see Figure 3).

While it is necessary to try to achieve meaningful links between theory and practice wherever appropriate, the liberal arts tradition, so much a feature of conventional teacher education, does ensure that teachers in training are given depth and a critical insight into the subject which they teach, and also a thoughtful approach to pedagogy.

This is not to say that training in school curriculum subjects and educational disciplines in the recent past was not in need of a substantial overhaul. It clearly was. The problem really lies in the very difficult task of linking educational theory to classroom practice, and the inability of many teacher educators and educational researchers to recognise this.

It is necessary to start developing a series of strategies which provide alternatives for teachers of all subjects and of all ages. The practicum curriculum was really an attempt to do just this.

However, the over-emphasis on classroom teaching skills and the neglect of many vital theoretical reference points, especially in the philosophy and sociology of education, deprived the practicum curriculum of that necessary depth. This was also found to be the case for some subject disciplines such as science and aesthetics. Another factor which must be taken into account is that a very special training is required for teacher educators who wish to use the practicum curriculum. They must be competent in their own subject as well as in at least one educational discipline.

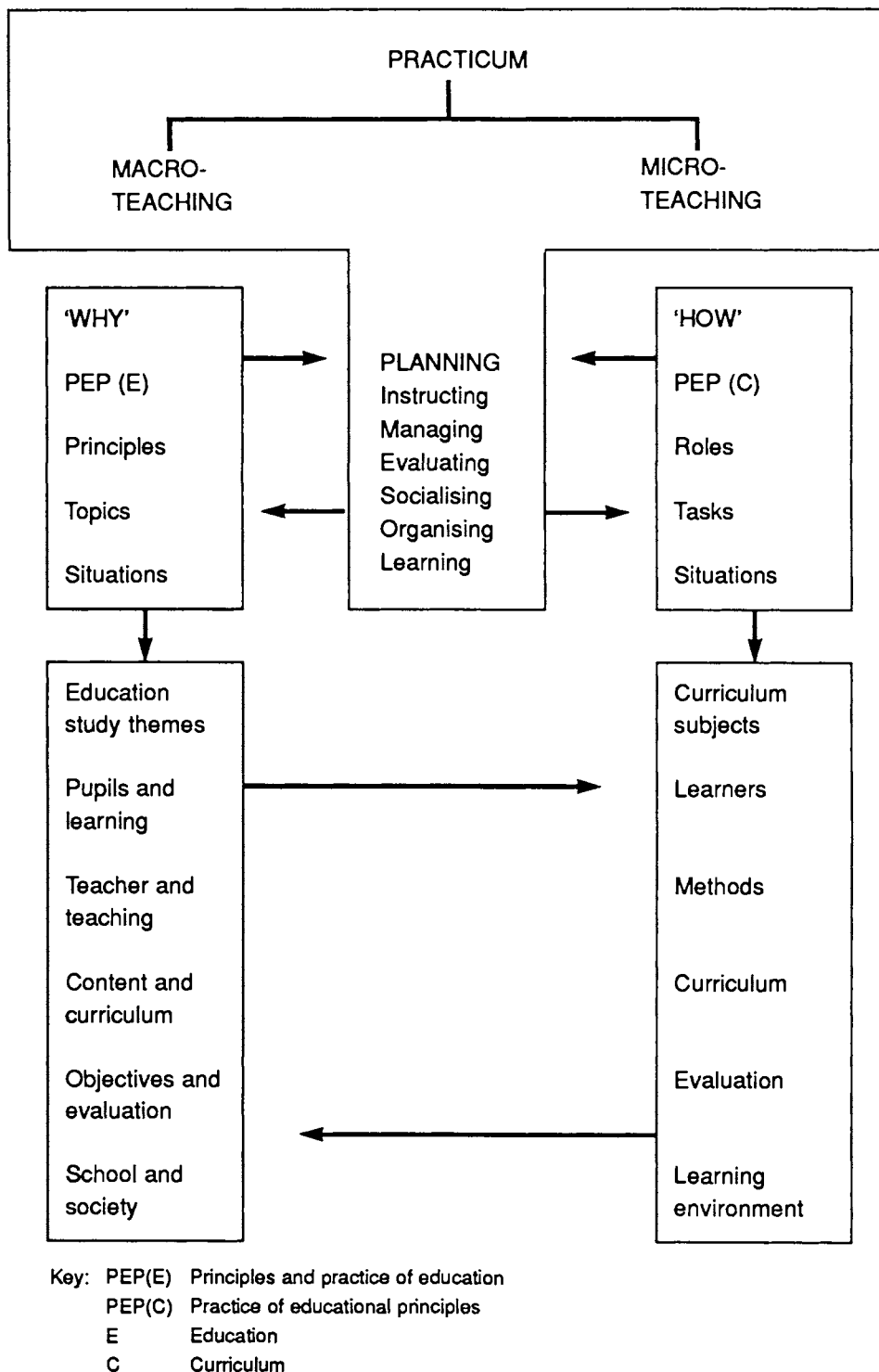
More important however, is developing the appropriate attitudes for wanting to integrate subject matter with education theories when and where necessary.

Any new strategies developed for the purpose of developing teachers into

educators should include the ideas and practices of the work of Schon on the teacher as reflective practitioner. Reflection coupled with sound training in content and pedagogical science (methodology) is, it seems, an essential part of any plan for teacher preparation.

This should be coupled with a wider choice of curriculum options for trainees, in such areas as environmental conservation, family welfare,

Figure 3 Practicum curriculum, Turney (1983) (as adapted* in Singapore)



* This is a simplified version of the Singapore model for the purposes of clarity.

counselling, basic health concerns and global responsibilities for pollution and population control. A wider curriculum would hopefully ensure that not only educators will be produced, but persons who are equipped to guide and assist young people into the next millennium.

A notional teacher preparation curriculum is given in Appendix 3, comprising the following: the components of liberal education; curriculum theory and practice; pedagogical science; technological awareness in education; practicum; reflective methodologies; life issues; and personal development.

Such a curriculum would achieve a much needed goal for all societies, namely a lifelong concept of education, which would not only benefit the teachers but those they teach and advise. It is to this concept that we will briefly turn as a conclusion to the present section on curricular issues.

Educating teachers and teacher educators for life

For any system of teacher education to provide long-term qualitative outcomes, it should be planned in such a way that the four phases in the process, namely, pre-training, preparation (or initial training), induction and in-service education need to be seen as a totality, as shown in Figure 4 (Thomas 1993a).

If this plan is accomplished, even if financial constraints are imposed from time to time as is often the case, at least the continuity of professional development has some framework. The continuous nature of a teacher's career development as far as the curriculum is concerned will focus on at least two areas. The first area concerns both the content and process of classroom subjects that are already being taught by the teacher; the second area concerns new fields of knowledge.

There are two approaches to this form of continuous teacher education. The first is really updating; the second is upgrading, an altogether more substantive process, leading to a higher degree or diploma. For the purpose of professionally updating changing knowledge and skills the need is to provide training for the newly trained teacher in his or her subjects. This can take place within two to five years after a teacher's initial training. However, in many developing countries of the Commonwealth, the gap may be ten or fifteen years and in some instances no updating may take place at all. The updating should affect all school curriculum subjects and so all teachers should be involved. This updating approach to continuous teacher education is not only important for the teacher but essential for pupils.

The second approach to continuous teacher education of upgrading is a longer and more intensive study of the teacher's subject specialisation, perhaps involving original research into a field of interest in the specialisation.

Figure 4 The teacher education continuum

Phase A	Phase B	Phase C	Phase D
Pre-teaching preparation experience	Initial teacher training	Teacher induction	In-service training and education

Career Direction



Upgrading of this nature usually means the teachers attending universities or research institutions, and taking a number of taught courses. The duration of study may be three years or more. The benefits to pupils and even to the teachers of engaging in this type of continuous education may be more difficult to measure, especially for teachers who return to school teaching. For those teachers who enter higher education as lecturers and teacher educators, the advantages are more apparent as they will not only have more subject depth but also much needed research skills. The experience of being a learner again, although at an adult level, also assists teachers and teacher educators in being more perceptive and learner sensitive as a cadre of professionals.

Frequently, some school and college staff engage in the study of a new field of interest. For instance, a science teacher may wish to take up educational psychology or philosophy to improve his or her competence as an educator. In some cases, teachers of history or languages may want to pursue science subjects, in order to give them a more all round education. Another instance would be a need felt by teachers to study environmental health and welfare concerns. They may perceive this as enhancing their social and societal role as teachers. We can again apply the two approaches to this form of continuous teacher education, depending on whether the teacher or teacher educator wishes to update or upgrade. Whatever the choice and whether the field of interest is new or old, the continuous teacher education which provides such opportunities is more than likely to benefit not only the teachers who pursue their professional improvement but also their students.

4 Teacher control and professional development

Ever since the seminal work of Etzioni (1969) on professionals and semi-professionals, and the insightful analysis of the subject of professionalism in relation to teachers by Hoyle (1980), and, more recently, Gordon (1983), the debate about whether teaching constitutes a profession in the same vein as doctors and lawyers still continues. However, if a professional is a person who has been admitted to a group that has defined for itself a system of credentials and code of conduct, after receiving a period of training in which proficiency in specialised knowledge linked to practice enables that person to carry out duties for the good of society, then a teacher would certainly qualify.

The principal issue in most countries, especially the newly emerging members of the Commonwealth, is about the nature of control and participation in decisions of vital interest to a teacher's conditions of service and career prospects.

Although teaching, whether at primary, secondary or college level, has the defining features of a profession outlined above there is little acceptance of the fact that, unlike the medical and legal professions, teachers are given little control and say in their conditions of service and job prospects. In many countries they may not even be consulted about changes and reform of the school or college curricula. Similarly, teacher selection criteria, accreditation as well as salary scales linked to qualification, job performance through appraisal and assessment, are usually decided exclusively by government.

In Ghana, Sierra Leone and Nigeria and to a lesser extent Zambia and Kenya, teacher subject associations such as a Science Teachers' Association or Teachers of English Association have in the past had some say in aspects of curriculum planning. In Malawi, there are strong subject panels which actively promote in-service education within particular subject areas like mathematics

or geography. However, in planning conditions of service and matters regarding salary, these bodies and their more powerful counterparts, the unions, have little control.

On the other hand, teachers' unions on the Indian sub-continent have always had a powerful political base. In India, Pakistan and Bangladesh, teachers' unions have usually played a strong role in salary negotiations, often disrupting teaching for many months at a time. However, in comparison to their African counterparts discussed above, teachers on the Indian sub-continent have had less impact on curriculum reform.

A similar trend can be discerned in Singapore and Malaysia, where governments have attempted to take teacher professionalisation seriously, seeing it has a crucial part to play in fostering teacher quality. In these two countries, regular seminars and workshops are held to examine various aspects of teacher involvement in curriculum and pedagogy. These are sometimes tentatively linked to reform and innovation. In Singapore the very successful Educational Research Association (ERA) invites all teachers who may be actively interested in classroom research to join its ranks. In both countries too, there are examples of newsletters to teachers informing them of recent developments in research and innovative classroom practice.

However, none of the above examples go further than teacher consultation. For teachers to be fully involved in total professional development, it is not sufficient that they be given opportunities to provide advice and assistance for solely classroom matters. There must be consultative structures in place which provide professional, organisational and administrative opportunities for the teaching profession to participate and share in decisions that count towards the present and future status of teachers. Except for a few embryonic instances in Canada, Australia, New Zealand and the United Kingdom, the concept of a balanced, responsible and shared decision-making process, between the policy and the plan, and those who implement both, is some way off.

5 Training teachers in research and evaluation

This paper has referred before to the need for an holistic approach to teacher education, which specifically mentions the place of research in the educative process. It is necessary, however, to clarify what is meant by research and how it differs from evaluation. As far as teacher education and training is concerned, including research into either teacher preparation and in-service programmes in most cases really means initiating teachers into the basic skills and attitudes necessary to carry out classroom-based research.

Research is basically a 'finding out' process which can be followed up by applying a scientific approach to a particular problem. It is hoped that this leads to the problem being solved. This approach can be used whether the researcher is using quantitative or qualitative methods (or a mix of both) to solve the problem.

Evaluation is closely linked to research in that both methods and techniques used in research can almost always be used in evaluation. However, the similarities begin and end there. If what is being evaluated consists of macro elements such as evaluating a new curriculum project, different types of research instruments may be used at different times and on different sections of the project. Evaluation is principally about measuring outcomes. In other words evaluation is assessment 'writ large' and usually includes

assessment of institutional programmes, international and national projects and courses of study.

In discussing research and evaluation in the context of teacher education, it is important to ask what are the aims and objectives of including these areas in a teacher education programme and whether the focus should be on initial or in-service training. While it has been pointed out above that research and evaluation are to some extent closely linked, ultimately they both serve different functions. Therefore, each area will be discussed separately.

Training teachers and teacher educators as researchers

There is a strong argument for introducing some basic research skills to teacher trainees during their initial training. Newly trained teachers are then likely to be more observant about noticing actual and potential problems in their classroom teaching. Furthermore, a good basic training in observation, recording, data analysis and problem identification, followed up by remedial action, sets up a favourable ethos for inquiry and remediation. Another outcome in the longer term is that the teacher may develop the interest to find out more about the problems and achievements of their pupils. The teacher may be motivated to become better trained as a researcher by attending in-service courses in research or even reading for a higher degree, in which research training is a part of the programme.

For both teachers and teacher educators, research training that stems from practical educational issues originating in the class, school or out of school environment, sets a contextual and pragmatic *raison d'être* for wanting to become a teacher researcher. In the United Kingdom, Australia and the USA, it is fairly common for teachers to develop research interests in their day to day work. It has to be said, however, that recent bureaucratic pressures, the greater learning problems of pupils, the extra demands involved in managing ever more difficult classes, and teacher performance being judged mainly on examination results, have all meant that there is less action research being carried out.

A problem which is frequently encountered when trying to include a research element into initial training is the lack of time and space in the curriculum. In some training institutions in Malaysia and Singapore, opportunities have been built into the practicum which enable students to use some of the research skills they have acquired during their time at the faculty or college. In some cases, these small investigatory projects are followed up in more depth in subsequent practicums. For example, students might observe class management problems and experiment with new methods of coping with them, or compare the teaching of languages using more informal and direct methods with those being currently used in the school.

Perhaps the most difficult problem as far as research training is concerned, is the issue of research capacity. Research capacity involves human and material resources. Both are problematic in many of the poorer Commonwealth countries. There is a crying need for more in-depth training in research methods that can be applied to educational problems, especially for teacher educators and key ministry personnel. The training should provide a broad spectrum of skills and knowledge so as to enable the personnel to carry out both school-based qualitative research, and also be part of a team that would be responsible for macro-level quantitative research projects often financed by donor agencies. Appendix 4 provides an outline scheme of research training

for educationists and researchers with special interest in teaching-learning, training and researching in education.

The material resource part of research capacity is also important. To carry out educational research is not as costly as it is in physics, electronics or medicine where capital costs for equipment are high. However, any policy for improving research capacity should consider the administration and management of both physical and human resources, so that facilities such as schools and colleges are available as sites for research, and so that staff can be released to engage in the research process.

Teacher education and evaluation

The lack of well-conducted macro-level evaluations of teacher education is patently clear when reading through the small amount of literature on the subject. There are several instances where alternative systems of teacher training such as distance versus conventional have been compared, in which evaluation techniques are incorporated (Mahlck and Temu, 1989; Perraton, 1993). However, for the most part evaluation of teacher education is confined to studies which examine an aspect of teacher education such as the nature of the practicum in the Caribbean, (Glasgow, 1993); teacher selection in Singapore, (Ho, 1994); the probationary year; sections of the college curriculum, such as the teaching of mathematics (Nunes, 1994); and cost effectiveness studies (Nielsen and Tatto, 1991). While micro-level studies are clearly necessary and desirable, they can only give a snapshot of the whole picture. Inevitably, this results in measures being taken to improve teacher education in a somewhat piecemeal fashion.

There is a need for large-scale evaluations of teacher education in all countries, as the drive to improve teacher quality gains momentum. The need is made even more urgent when governments embark on major reforms of teacher training without having the necessary data to substantiate change. For instance, there was in the late 1980s and early 1990s a far-reaching reform of initial teacher training in parts of the United Kingdom which was based on little or no large-scale research findings.

In order for successful small or large-scale evaluations to take place, it is necessary that the research capacity embracing both human and material resources discussed earlier is developed to the full. A sound start would be the preparation of teachers in basic research training followed by further substantive programmes later in the careers of teachers and teacher educators. This is likely to pay dividends if and when large changes in teacher education are ultimately evaluated.

The role of international comparisons

One is reminded of Shakespeare's warning: 'neither a borrower, or a lender be' when thinking about the use of international comparisons in education. This is particularly the case when examining the adoption of educational ideas and practice and their impact on future educational policy. The warning had particular import during the era of colonialism, where there was a transfer not only of ideas, but of a whole system of education from one society to another. However, educational comparisons can often have a positive side, provided that they are taken at face value. International comparisons may or may not be a relevant source of information. If the comparisons are worth

considering, the next step for the potential recipient is to work out a sound rationale for using ideas which are integral to a particular comparison.

As far as teacher education is concerned, there has been considerable exchange and transfer of ideas. In Caribbean countries it would seem that much of the originally British philosophy of teacher education has been superseded by American competency-based models. In the adoption of alternative teacher education structures to increase the capacity of qualified teachers, extensive comparisons have been made within the African continent. For instance, sandwich schemes for initial teacher training in Nigeria introduced in the late 1970s benefited from looking at similar experiences in Malawi (Hawes and Ozigi, 1975).

In some cases, however, the comparisons have not been as thoroughly researched as they might have been. The introduction of the University of Sydney Practicum Curriculum for the initial training of teachers first into some training institutions in Malaysia and then in the Singapore Institute of Education was not altogether successful. In both instances it seemed that policy decisions, organisational structures and certainly teacher educator attitudes were not conducive to making theory and practice coalesce in the way originally envisaged in Australia.

There are many instances from all over the Commonwealth where comparisons have been explored and action taken. These include areas such as teacher professionalisation, teacher assessment, teacher selection, research training, the use of curriculum designs and materials, and the setting up of institutional structures, such as teacher professional centres and research institutes. In many instances the outcomes might have been more effective had a thorough situational analysis been undertaken before the ideas had been accepted and implemented. The substantial literature on educational innovation acceptance and rejection shows the extent of the problem, with so many well-intentioned ideas failing to come to fruition.

Commonwealth countries should make greater use of their existing networks, to develop strategies that enable educationists to examine new ideas in education, and put in place action procedures concerned with assessing the prospects of acceptance or rejection of these ideas.

There is a very important role for international comparisons in education. They are often a much needed source of new ideas and practices. They enable the key issues outlined in the present paper to be examined from several different perspectives. They provide benchmarks from which improvements can be considered. Finally, international comparisons of issues make all of us re-examine our own problems in teacher education and are a guard against complacency. The problem lies in setting up effective structures and developing the expertise capable of assessing the worth or otherwise of these comparisons, from which might arise ideas and practices that would benefit a particular country.