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ABSTRACT

This document reports on the first international conference in Japan in October 1992 to open up a dialogue among Organisation for Economic Co-operation and Development (OECD) member countries and the Dynamic Asian Economies (DAEs) of Hong Kong, Malaysia, South Korea, Taiwan, Thailand and Singapore. Experts from each of the DAEs attended the conference as did representatives of a number of OECD countries. Significant educational issues facing all participating countries were discussed. The book is divided into five chapters with subsections prepared by various participants. Chapter titles include: (1) "Introduction"; (2) "Education as an Instrument of Economic and Social Development"; (3) "Education as Innovation and Development: Schools and Systems"; (4) "Reports of the Working Groups"; and (5) "Overview of Issues and Themes." An annotated agenda, annotated bibliography, and list of participants complete the book. (EH)

OECD DOCUMENTS

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PROCEEDINGS OF A CONFERENCE IN HIROSHIMA

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PUBLISHER'S NOTE

The following texts have been left in their original form to permit faster distribution at lower cost.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Pursuant to Article 1 of the Convention signed in Paris on 14th December 1960, and which came into force on 30th September 1961, the Organisation for Economic Co-operation and Development (OECD) shall promote policies designed:

- to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;
- to contribute to sound economic expansion in Member as well as non-member countries in the process of economic development; and
- to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

The original Member countries of the OECD are Austria, Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The following countries became Members subsequently through accession at the dates indicated hereafter: Japan (28th April 1964), Finland (28th January 1969), Australia (7th June 1971) and New Zealand (29th May 1973). The Commission of the European Communities takes part in the work of the OECD (Article 13 of the OECD Convention).

The Centre for Educational Research and Innovation was created in June 1968 by the Council of the Organisation for Economic Co-operation and Development.

The main objectives of the Centre are as follows:

- *to promote and support the development of research activities in education and undertake such research activities where appropriate;*
- *to promote and support pilot experiments with a view to introducing and testing innovations in the educational system;*
- *to promote the development of co-operation between Member countries in the field of educational research and innovation.*

The Centre functions within the Organisation for Economic Co-operation and Development in accordance with the decisions of the Council of the Organisation, under the authority of the Secretary-General. It is supervised by a Governing Board composed of one national expert in its field of competence from each of the countries participating in its programme of work.

FOREWORD

In October 1992 the Organisation for Economic Co-operation and Development (OECD), in association with the University of Hiroshima, held an international conference in Japan. One purpose of the meeting was to open up a dialogue among OECD Member countries and the Dynamic Asian Economies (DAEs) of Hong Kong, Malaysia, South Korea, Taiwan, Thailand and Singapore. Experts from each of the DAEs attended the conference as did representatives of a number of OECD countries.

All levels of education from primary to tertiary featured in the discussions and, through a series of prepared presentations, small groups, panels and informal exchanges, a wide range of current educational trends of issues was addressed:

The conference was held back-to-back with the annual meeting of the Pacific Circle Consortium (PCC), an organisation of experts, formed under OECD auspices in the late seventies with a specific remit to develop curriculum resources with an Asian-Pacific flavour. This conjunction meant that those attending the PCC meeting were able to participate in the large Conference undertaken by the PCC and to use the occasion as a means of informing the DAEs about curriculum development work in the region and giving them the opportunity to associate with the PCC.

The OECD regards these events as an important step towards closer working relations with the nations of the Asia-Pacific region. This report, prepared by Professor Emeritus Phillip Hughes of the University of Tasmania, Australia, with Secretariat advice and assistance, and incorporating the concluding overview prepared by Dr. William Renwick of the Victoria University of Wellington, New Zealand, is a comprehensive record of a significant event. The extension of the dialogue and the friendship that was initiated through the conference will be valuable to the OECD and, we trust, to all participants, in the years ahead.

In preparing this report Professor Hughes has sought to contextualise the Hiroshima Conference, setting it against the objectives and characteristics of the OECD as an Organisation and relating it to other educational activities, especially the Conference on Curriculum Redefined, held in the OECD in 1993. He thus enables readers not familiar with the Organisation to understand the part that educational analysis and policy review play within it and the great significance of education in the continuing years for economic co-operation and development.

The report is published on the responsibility of the Secretary-General of the OECD.

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ISSUES IN EDUCATION IN ASIA AND THE PACIFIC: AN INTERNATIONAL PERSPECTIVE

1. INTRODUCTION

1.1 A New Dialogue: The OECD and The Dynamic Asian Economies

Phillip Hughes
University of Tasmania/OECD

New Perspectives in Geography and Thought

The OECD, though centred in Paris, has through its 24 member countries world-wide interests. Europe, Scandinavia, North America, Asia and the Pacific all make their contribution to its programmes and thinking and receive the benefits of co-operative activity. In the period of rapid adjustment of the 1990s, OECD has had to think further about its relationships with these other groups. One is Eastern Europe, where new governments are emerging with similar interests and orientations to the OECD members. Another is Asia, where some rapidly developing societies are facing challenging economic, social and political situations. Prominent in this group are the so-called Dynamic Asian Economies (the DAEs), Hong Kong, South Korea, Thailand, Singapore, Malaysia and Taiwan. The third is central and southern America.

The OECD has had over several years preliminary discussions with the DAEs on economic and social issues. In 1992, a dialogue was initiated on education in the form of International Conference on Education Co-operation in the Asia Pacific region. Appropriately, the host country was Japan, a long-standing Member country of the OECD, and the host institution was Hiroshima University. The conference was linked with the annual conference of the Pacific Circle Consortium, an affiliate of the Organisation's Centre for Educational Research and Innovation (CERI), linking OECD Member countries around the Pacific, Canada, USA, Australia, New Zealand and Japan, but also, with strong interests in Asia. The Education Committee of the OECD, mainly responsible for policy analysis (see below) joined with CERI and the Japanese authorities in planning and organising the meeting.

The purpose of the meeting was to establish and extend dialogue, not to form an organisation or to make formal agreements. It was to be for all participants an extension, an extension both in geography and thought. The issues were to emerge from the discussions, rather than be identified beforehand.

This report is the account of that meeting, and of those extensions. It aims to indicate the nature of the presentations and the gist of the discussions. These are the basics for an identification of issues of importance to the participating countries, now and in the years ahead. What is clear, is that the participants all were struck by the degree of common interest revealed and felt that this first step was just one of many.

The PCC-OECD Consortium

The Pacific Circle Consortium was established in 1977, involving institutions from OECD Member countries in and around the Pacific Ocean, initially Australia, Canada, Japan, New Zealand and the United States of America. It commenced as an innovative programme of CERI. The link has been a distant one for much of that time, and may seem to some to owe more to past

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associations than to present realities or future prospects. Now is probably a good time for a realistic assessment, both of PCC and its OECD connection.

The PCC is currently composed of sixteen participating institutions and has no entity beyond those institutions. They are listed below in the paper by David Wood.

Nine of the sixteen are tertiary institutions, predominantly the education faculties of universities. The other seven are government (or government-associated) departments dealing with school curricula. At the time of writing, two further universities are in process of becoming members, the University of the South Pacific, USP, in Fiji and the University of Western Sydney at Nepean and negotiations are taking place with other institutions including those among non-member countries. The purposes of the Consortium were spelled out at the original meeting of CERI and Pacific representatives convened by Dr Malcolm Skilbeck, then at the Curriculum Development Centre, and now Deputy Director for Education at the OECD. Those purposes are still in effect, and still highly relevant.

Purposes of the PCC

- To promote international and intercultural understanding and co-operation among the peoples and countries in and around the Pacific Ocean
- To foster learning and teaching about peoples and countries in and around the Pacific Ocean;
- To undertake international co-operative development and dissemination of curriculum materials and activities;
- To conduct international collaborative educational research;
- To explore educational policy issues and ideas;
- To facilitate the sharing of ideas, information, resources, materials and personnel among Pacific countries and their educational institutions;
- To design, develop and conduct professional programmes;
- To organise conferences and workshops on important educational topics related to the Pacific.

Educational Goals and Purposes in the OECD

For its part, the OECD, grew out of the post-war commitment to economic development, following the recovery of war-damaged economies. The original OECD interest in education was stimulated by the concern that economic development in the Member countries could be at risk, because of shortages of specialised personnel, and thus the arm of OECD to deal with this was the Committee for Scientific and Technical Personnel. The realisation grew that such a limited brief was unsatisfactory and that it was necessary to consider the overall functioning of the education and training system. Thus the Committee for Scientific and Technical Personnel became the **Education Committee**, whose mandate reads as follows:

a) to evaluate prospects and policies for educational growth and development in order to meet social and economic objectives, taking into account the need for optimal allocation and efficient management of the total resources for education;

b) to exchange information and promote international co-operation on the problems identified under (a) above.

The Education Committee operates on a five-year, renewable mandate. Generally its extension is justified at the preceding meeting of the Committee at Ministerial level which assesses its work and frames the priority areas for action during the next mandate.

OECD as an intergovernmental body cannot impose its decisions, or those of its committees, on Member countries who can only be convinced by the worth of the case prepared by the Secretariat. Thus, the development of data banks and the capacity for analysis of the Secretariat are vital and it is also important to develop a policy base to which all Member countries are committed. It is significant that the 1990 meeting of Ministers of Education, considering the challenges faced by their societies, agreed on a substantial set of policy orientations to guide future activities. These are as follows:

i) a high quality start to lifelong learning -- the crucial role of initial education and training;

ii) quality and access in a lifelong perspective;

iii) education 'for all' implies priority for the educationally under served;

iv) overcoming illiteracy;

v) the need for coherence and focus to avoid curriculum overload;

vi) improving the quality and attractiveness of teaching in education and training;

vii) information and data -- preconditions for sound decision making;

viii) evaluation and assessment -- identifying progress, diagnosing problems;

ix) research and innovation need further development;

x) enhancing the international dimension of education and training policies;

xi) financing high quality education and training for all." (OECD, 1992).

The Ministerial list, or agenda for action, is a natural extension of the work of the 1980s, but it needs to be recognised that it is also a very substantial and dramatic extension. From a very limited aim, to increase the supply of scientific and technical personnel, OECD has been led inexorably, not by some grand philosophical design but by the hard logic of the social context, to commit itself to a high quality education and training for all, with its implications for access, for equity, for purposes, for curriculum, for pedagogy, for evaluation.

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The **Centre for Educational Research and Innovation**, CERI, was set up in 1968 by OECD, with external funding, and the following tasks:

i) to promote, support and undertake policy-relevant educational research activities;

ii) to introduce and test innovations in education; and

iii) to promote international co-operation in the field of educational research and innovation.

CERI's work was to focus on three areas of primary concern, namely:

i) research into the strategic interactions between education and other areas of social, economic and labour market policy;

ii) the development and exchange of innovations in the teaching/learning process; and

iii) the strengthening of national and international arrangements for educational innovation and development.

In spite of changes in the context of education, these purposes still remain relevant. In the 1980s all Member countries have experienced major changes in policy and practice: e.g. trends towards decentralisation and devolution, wider participation in decision-making, increased demands for accountability, internationalisation, a greater receptivity of educational institutions to economic and socio-cultural influences and an increasing concern for the quality and appropriateness of education and training as part of lifelong learning. In these circumstances, the CERI brief remains highly relevant, essentially to identify the major obstacles to the long-term qualitative improvement of educational practice in the OECD Member countries and to search for effective ways to overcome these obstacles, to promote educational experimentation and innovation. In education, the benefits of international co-operation are as useful as, but different from, the benefits in an area such as the economy. The benefit in education comes from the joint exploration and analysis of trends and issues, using the experience in broadly similar countries as a basis for comparison and as an element in national policy discussion.

OECD-PCC: Developing Linkages

In considering how the PCC-OECD link might develop further, the key lies in the nature of CERI, where that link is currently made. CERI is not of course unique as being an international organisation concerned with educational research and innovation. It is the location of CERI within OECD that provides its specific character and emphases. In particular, the distinctive features of OECD, "dialogue and consensus-building; rationality and pragmatism; pluralism and multi-disciplinarity" (CERI, 1992), are features also of CERI, both in the way its programme is developed and in its approach to problems. It is this way of working which is central to the question of the PCC link. The Member countries form a particular sort of association, not of donors and recipients but of co-operating partners in which all contribute to the work and decisions and all benefit from them. Thus the future of PCC in relation to CERI/OECD should depend on the same principle, of mutual benefit rather than past association or perceived needs.

In reaching any conclusions, the experience of the recent Hiroshima Conference on Educational Co-operation in the Asia-Pacific Region may give significant indicators as to whether

PCC can enhance the CERI/OECD role in the Asia-Pacific region and whether CERI can strengthen the work of PCC in that same context. The context itself is an important element in such decisions.

Asia-Pacific: A Major OECD Region and the Context of PCC

Asia and the Pacific is not an obvious regional unity. It shows great diversity: in geographic conditions, cultural traditions, population dispersion, political systems, religious affiliations and economic situations. Yet, it sees itself, and is seen externally, as having joint interests which merit closer association. It is one of the designated UNESCO regions and there are two well-established regional education programmes based on UNESCO, Bangkok; APEID, the Asia-Pacific Programme of Educational Innovation for Development and APPEAL, the Asia-Pacific Programme of Education and Literacy. In addition, SEAMEO, an exclusively regional body, has established two centres for educational development in the region, in Penang and Singapore. More recently, APEC, Asia-Pacific Economic Co-operation, has established an education initiative. The Asian Development Bank, the World Bank, UNDP and UNICEF all have substantial initiatives in the region.

The region is one where economic development is more rapid than anywhere else, not only through the established powers such as Japan and China, but through a number of rapidly developing countries, the so-called DAEs, Dynamic Asian Economies. While currently it makes fewer headlines than Eastern Europe or Africa, for political or economic crises, it is the site of some major tensions: between Japan and Russia; between the US, Japan and China; China, Hong Kong and Britain; Malaysia, Singapore and Indonesia; China, Vietnam, Cambodia and Thailand. South America has scarcely emerged as a player on the Pacific scene and must be expected to do so, following the political changes occurring in those countries. The whole shape and composition of this vast region is changing fundamentally and will make its own substantial impacts on the world scene.

The OECD already has a significant interest in the region. Five of its Member countries are a part of it, Canada, USA, Australia, New Zealand and Japan, and Mexico is a closely associated country, moving towards OECD membership. The Organisation is not a Eurocentric or Transatlantic body, as is sometimes assumed, but global in its interests. Its world-wide interest is a matter of history and not of speculation. What remains unclear is the nature of any further extension of activity and membership and whether PCC has a role. That should depend essentially on its congruence with the education brief for CERI.

CERI/OECD -- Developing the Education Brief

The policy brief for OECD, and thus the context for CERI, has already been outlined. That brief, and its Ministerial commitment, provided the basis for two major OECD international conferences. One was the Conference on The Curriculum Redefined, in Paris in April 1993. The other was the Conference, reported here, on Educational Co-operation in the Asia-Pacific Region in Hiroshima in October 1992. The latter was organised in association with the Pacific Circle Consortium to provide a setting for dialogue with the Dynamic Asian Economies. To what extent do they provide an indication for future choices and future actions?

The Hiroshima Conference, while not aiming to produce specific agreements but to provide a forum and to lay the foundation of continuing dialogue, was notable for its identification

of common issues as well as its acknowledgement of distinctive elements. Seven common issues provided a picture of the major concerns as these Asian-Pacific societies analysed their own situations. The Paris Curriculum Conference, too, in considering curriculum issues for the future, grouped their concerns under seven headings and the comparisons are illuminating.

i) Opportunity to learn

For the Paris discussions, this phrase raises the hard questions which lie behind the commitment to a high quality education and training for all. High quality education has often been a reality, as has high quality vocational training. Can we achieve both? More importantly, can we do it for a whole population? It is this extra step, this giant extra step, which poses the difficulties. Opportunity to learn carries the implication that it can be done provided we offer genuine opportunity. The issues raised include a common core curriculum, access and equity as a part of opportunity, and opportunity linked to achievement.

The Hiroshima discussions contained the same acceptance of the central place of this idea. In some senses, it provided less difficulty. Education in these settings is seen explicitly as a part of national policy, economically, culturally, historically. This has been a key aspect of political development, the building of a national system for universal education, a building constructed remarkably rapidly, within the professional life-times of the people involved. The time-scale is very different to that of the earlier industrialised societies where that building has spread over 120 years.

The difference in pace is important. For the DAEs the extension has been a consistent expansion and unfolding of opportunity, whereas for many OECD Members it is a matter of successive levels, each reached through a major change, requiring a different frame of reference. Paradoxically, the slower pace of change has required the greater reconceptualisation, as for succeeding generations the concepts of a lifetime have to be re-thought. The DAEs, too, while clear on their own distinctiveness and individuality, accept more easily the ideas of commonality on an international base. For them, the fundamental challenge lies more in the quality emphasis of quality for all, and less in its universality, more naturally accepted.

ii) The social condition and the curriculum

For both conferences, this issue was important. Our societies are showing the stress of change, not only in the most visible aspect of technology but more crucially in the health of social institutions such as the family, in the impact on individual attitudes and values, in the cohesion of the societies themselves. Can the curriculum address these issues? Hiroshima posed the question in a particular form. Can we retain moral and cultural values and enhance individuality, as we adopt the changes aimed at economic development?

iii) Critical interfaces

The requirement for quality education and training places a particular importance on providing a continuous and coherent schooling which relates effectively to outside institutions and activities. For both conferences that was seen as a problem. Schools are essentially bounded institutions not relating easily to others, even other schools. Internally, this brings major discontinuities, as students move from class to class, and from stage to stage. Externally, schools have not often been involved in effectively developed partnerships -- with parents, with business and industry, with further education. For Hiroshima, this was shown most clearly at the secondary-

university divides where pressure for university entry translated back to inappropriate examination patterns, distorting the curriculum emphasis and restricting the teaching approaches.

iv) A research and development base

For both Paris and Hiroshima, two questions were important. How can we best mobilise currently available research which relates to important issues? What priority questions remain unanswerable until we can develop better research information? For Hiroshima, one implication was the need for a good international database and effective information flow.

v) Decision-making

A major concern for both discussions, was in the dysfunctions of decision-making, including particularly the effects of over-simplified concepts of central control, of decentralisation, of devolution. The Paris emphasis was on the complexities involved in balancing government policies, professional contributions and student expectations, for example. There are many different focuses of curriculum decision, many different stakeholders, many different decision locations. Curriculum reform of the significant nature now envisaged, required consideration of all these aspects. A further emphasis expressed in Hiroshima was the need for the various stakeholders to recognise both the legitimacy of other claims and the peculiar constraints under which they operate.

vi) Areas of knowledge and experience

The common focus was on the importance of re-conceptualising the roles of different areas of knowledge and experience, not only as separate disciplines, but in their interactions and convergences. The importance of well-organised approaches to both disciplinary and interdisciplinary studies was emphasised for the extended school population.

vii) Reconciling assessment purposes

Both discussions recognised the need to reconcile the approaches required for two distinct but necessary purposes. One purpose is to use evaluation to identify student strengths and weaknesses as a guide for teaching. Another purpose is to use it to reveal issues of equity, access and inappropriate resource use.

The purpose of this analysis is simply not to demonstrate that two conferences, held within a year of each other and dealing with many common concerns, reached identical conclusions. Rather, it is to emphasise that the OECD Member countries and the DAEs are essentially grappling with the same spectrum of issues. In terms of OECD interests, particularly in view of the CERI approach to educational issues, there is much to be gained from a dialogue, a dialogue, moreover, which will both identify common interests and distinguish differences in perception, approach and outlines of action. The broader range of cultural influences will provide a more diverse and thus more fruitful base for analysis.

Is the Pacific Circle Consortium a useful vehicle as part of such an extended dialogue?

A major factor for PCC, is the fact of its continued existence and growth. It has functioned, as a CERI programme, for over 16 years and in a way that is appropriate for such a programme -- the use of research, of dialogue, of consensus building, of respect for differences and refusal to impose solutions. The PCC pattern of working, through working institutions, with their

own profiles of priority and their own resources, offers both flexibility and great potential. While the process is not dependent on government support, the existence of such support from national and provincial governments is significant.

The ambit of PCC, and particularly its strong emphasis on curriculum may seem to be restrictive. Yet the PCC purposes are consistent with, indeed part of those of CERI, particularly if PCC develops the explicit links with teaching and learning which are an unavoidable consequence of an aim for curriculum reform. One of the concepts which resonated in both Paris and Hiroshima, was that curriculum changes and pedagogy changes were organically linked.

For the moment no dramatic steps are required other than an indication of the reality of the CERI-PCC link. Hiroshima demonstrated that the DAEs welcome both their recognition as equal contributors and an issue-based approach to further dialogue. They were quite explicit in indicating a wish to continue. The PCC agenda of workshops and annual meetings could provide one basis for such a development without any more substantial resource than a CERI presence.

The policy commitment of OECD is unequivocal. It is clearly important to find ways of carrying forward that brief, so important to the healthy development of our societies. This can be done in a way which signals again that "through international co-operation no-one need lose; all may gain". This broadening of the dialogue offers possibilities of major advances in our thinking about and our practice of curricular reform.

Reference

CERI, 1992. Introduction to the Work of the Education Committee and CERI, OECD/CERI, Paris.

1.2 Conference Opening Address

Mr Isao Amagi,
Special Advisor to the Japanese Ministry of Education

OECD is the Organisation for Economic Co-operation and Development and aims at socio-economic development in broad aspects, in particular putting great importance on educational development as a basis of socio-economic development from the very beginning of the establishment of the Organisation.

OECD is the international organisation of so-called western industrialised democracies having 24 Member countries. In the 1980s there have emerged countries and regions in Asia which have shown remarkable economic development and growth. From the standpoint of OECD those countries and regions are no longer in the developing stage and OECD categorised those countries and regions in Asia as Dynamic Asian Economies; namely Hong Kong, Korea, Malaysia, Singapore, Taiwan and Thailand. Also OECD recognised that it is desirable to co-operate with DAEs for the development of the world economy. Since 1989 informal dialogue between OECD and DAEs has continued with a modest and cautious beginning, confined to economic affairs, trade and investment.

In the field of education OECD/CERI established the Pacific Circle Consortium (PCC) among five Pacific Rim Member Countries in 1977 under the category of innovation exchange activities of CERI. PCC is the Consortium of educational institutions of the five countries aiming at the development of school curriculum to promote international/intercultural understanding among Pacific Rim Countries.

Economic growth and development in recent years in DAEs have been remarkable. At the same time, we must not overlook educational development which firmly established the foundation of such remarkable economic development in DAEs. In the DAE countries and regions primary education has been almost popularised and secondary and higher education are also highly developed, at the same time DAEs are now facing new educational issues and problems similar to those of OECD Member countries.

In Asia-Pacific there have been many regional co-operative programmes and activities in the field of education such as APEID and APPEAL of UNESCO, SEAMEO programmes and projects and, very recently, a proposed new Education Forum under APEC.

The idea of OECD to co-operate with DAEs is not to establish another regional co-operative scheme. Its purpose is to have a dialogue among industrialised democracies in Europe, the Pacific and Asia.

As you see in the Draft Annotated Agenda, which refers to various issues and problems in primary, secondary and higher education commonly found in industrialised democracies of OECD member countries, the situations are almost the same, I believe, in DAEs.

Ladies and gentlemen, I do hope that participants will discuss frankly and thoroughly the educational issues and problems and will identify relevant themes and modalities of dialogue for the development of education in the Member countries and DAEs.

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Last but not least, I would like to express my gratitude to Professor Skilbeck and the OECD/CERI Secretariat and President Tanaka and Hiroshima University staff concerned, for their excellent leadership and dedicated efforts in organising this meeting.

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1.3 Welcome Address

President Ryuso Tanaka,
Hiroshima University

Mr Amagi's address was followed by a welcome from the President of Hiroshima University, the host institution. Dr Tanaka welcomed all participants and thanked OECD for the initiative and the City and Prefecture of Hiroshima for their support.

It is indeed impressive to our eyes that many Asian societies in the Pacific region have shown such remarkable achievements in social and economic development in recent years. Particularly striking are the development of several Asian societies, that are called the "Dynamic Asian Economies". The development of each of these economies has naturally significant implications for the welfare of its own people. But the emergence of these economies is also important for its influences on other economies in Asia and, eventually on all the economies around the Pacific. Thus, the Asia-Pacific region is becoming the scene of one of the most dynamic social and economic changes.

The very dynamic changes in those economies, however, appear to be posing serious challenges in every sphere of the society, including social, economic, and cultural institutions. But, the challenge is particularly daunting in the arena of education. Primary and secondary education, while becoming increasingly universal, still has to undergo a constant process of qualitative upgrading. Governments have to face the expansion of demands for the opportunity of higher education, at the same time trying to secure their social relevancy. Academic researches have to be pursued vigorously to be abreast with industrialised countries. All of these tasks, moreover, have to be achieved under the constraint of still limited resources.

Obviously, the nature and magnitude of those challenges should vary substantially by society, each reflecting its own historical and cultural background. Nonetheless, observations by the experts in the field tell us that at least some of the most serious issues are in fact quite similar from society to society. The similarity, moreover, is not limited to the Dynamic Asian Economies. Many issues faced by those societies are in fact the issues at stake in other, whether more or less industrialised, societies in the region. Thus it would be very fruitful for the societies in the region to learn from each other about the problems and experiences. Also, the dynamism of the regional societies implies both the need of increased mutual understanding, and the potential merit of academic stimulations from each other. The benefits expected from exchanging scholars and students are greater than they ever have been. Thus, the dynamism of development in the region is creating both the needs and opportunities for mutual co-operation in the field of education.

From these perspectives, I highly appreciate the efforts of OECD in building the basis of international co-operation in education. As the President of the Conference rightly pointed out, OECD has not only been successful in promoting co-operation among its Member countries, but also has been active in extending its expertise to the non-member countries. By not confining its scope to the Member countries, it has already created significant contributions in world development. Further developments in that direction are being vigorously pursued, and I am convinced that the conference we are attending right now will be one of the critical starting points.

I would also like to add that our Hiroshima University has a long history of academic co-operation with the societies in the Asia-Pacific region. Since before the war, it has received many students from the Asia-Pacific region, particularly in the field of education. After interruption by the unfortunate war, the university has shown again vigorous development. Now with its eleven faculties and nine graduate departments, the university is striving to develop itself as a dynamic institution which is firmly based upon the academic commitment of each faculty member. Such an institution naturally necessitates and desires international exposure. Currently 500 students from the Asia-Pacific region are enrolled in undergraduate and graduate courses of the university. The university has formal exchange programmes with as many as 22 institutions of higher education in the region. Last year alone, almost 800 faculty and staff members visited various societies in the region for research and technical co-operation.

Also may I add that our Hiroshima University has been active in organising regional activities in co-operation with international organisations. In the field of primary and secondary education, our university has been hosting regional seminars of Asia and the Pacific Programme of Educational Innovation and Development, in co-operation with UNESCO. Also our university has been an active member of the Pacific Circle Consortium, which had been organised under the auspices of OECD for the purpose of curriculum development. As for higher education, our Research Institute for Higher Education has been very active in promoting international co-operation by hosting almost annually international seminars and conferences in co-operation with OECD and with UNESCO. I am very proud that our university has succeeded in making such substantial contributions, and determined to build upon the past achievements.

Allow me, Mr President, to conclude my address by making an observation from biology, my own field of study. In the field of biology we have a concept called the law of "irreversible differentiation", implying that any biological creature differentiates as it develops. When we reflect on the present world from this perspective, we find ourselves in the midst of increasing heterogeneity in values and lifestyle. Indeed, it appears as if human beings, as biological creatures, can be no exception to this mighty law. Such differentiation may eventually invite serious disruption in cohabitation. Nonetheless, it is my firm belief that human beings are in fact able to control their biological nature by extending their very uniqueness, the power of reason and intelligence. That is exactly the role of the university in society. In that sense, a university should be, by its own nature, committed to peace.

Indeed, this is the belief shared by my colleagues in our university which experienced 50 years ago the tragic agony of the atomic bomb. By co-operating to fortify our reason and intelligence, we will be able to create a peaceful Asia-Pacific region, and eventually a peaceful world. To that purpose, I believe the present conference will be a significant step.

1.4 International Co-operation in Education: an OECD Perspective

Professor Malcolm Skilbeck,
Deputy Director for Education, OECD

The Nature and Growing Importance of International Co-operation in Education

International co-operation in education has long been of interest to teachers, researchers and scholars who have developed extensive academic research and scholarly networks, organised conferences and meetings, maintained lengthy correspondence, established journals, arranged visits, sabbaticals and, increasingly, student exchange and overseas study programmes. The purpose of all this activity includes education for international and intercultural understanding, but goes beyond simply understanding and appreciating other nations and cultures.

Knowledge, which is the staple of education, is an international commodity whose vitality and growth depend on the free exchange of information and ideas. Increasingly, the growth and extension of knowledge entails collaborative projects that cross national borders, that involve quite substantial movements of people and networks of institutions as well as individuals. International education also extends to the applications and uses of knowledge, to joint and collaborative programmes in which education contributes to human betterment and social, economic and political development.

Government participation there has been, and needs to be, but it is as well to recall that international education has depended and still very largely does, upon the initiative of individual researchers, scholars and teachers, of individual institutions and of various professional associations and voluntary bodies.

I have much pleasure in paying tribute to the Pacific Circle Consortium, a very good example of voluntary effort with a minimum of government involvement at least as far as several of the participating countries are concerned. It is not my purpose today, however, to enumerate examples of such co-operation. Suffice to say that little can be achieved by way of internationalising education whether that be in terms of research consortia, co-operative development projects, student and faculty exchanges, overseas study programmes or the numerous other ways in which international understanding and co-operation are fostered -- little, I say, can be achieved without the commitment and involvement of the education profession itself. Governments have of course a very significant a role to play, in providing appropriate diplomatic and policy frameworks, in facilitating flows of students and staff, in providing financial incentives and in forming partnerships, for example with educational or commercial organisations. Governments also have a responsibility in relating international educational activities to other kinds of international exchange, be they cultural, political, or economic. But the whole fabric of international education collapses unless the educators themselves and those being educated see its value and throw themselves into the sustained effort that is required to bring policies to life, to make programmes work. Educators' horizons must extend beyond the local or the national as the world becomes, more and more, a single global community, thus the concepts of regionalisation -- in the sense of a grouping of countries and cross-national thematic activity -- and of globalisation -- in the sense of belonging to a single world -- must be given more attention.

It is with these thoughts in mind that, in organising this conference, we have brought together teachers, scholars, researchers, policy makers and administrators, and have sought to

involve a wide range of countries both from within the region and beyond it. Through the exchange of information and ideas, through well-focused discussion and debate, on our own educational systems, let us see which issues and problems we have in common, which successes might be emulated, which problems avoided, and which topics might lend themselves to future co-operative work of benefit to us all.

Education has typically and traditionally been seen as a major factor in the domestic policy of countries. Moreover, educational systems, ideas and practices have been exported in times of imperial expansion or reconstruction following wars between nations. Although, for at least 100 years, strenuous efforts have been made to develop international programmes, on a partnership basis, it is only in the past two or three decades that the international scope and implications of what are often seen to be purely national interests have begun to be widely realised. The setting is no longer the nation state and its requirements. As the century draws to a close, that realisation will increase; the twenty-first century will surely be that of international education, not to the detriment of national concerns and systems, but enhancing and enriching what can be done within the nation state and suggesting new possibilities for effective co-operative action to meet global educational needs.

Dialogue and the OECD

Since 1989, there has been an informal policy dialogue between the OECD and certain Asian economies: that is, between the 24 industrialised Member states of this club of nations and the six nations known for the purpose of the dialogue as the Dynamic Asian Economies (DAEs): Hong Kong, Korea, Malaysia, Singapore, Taiwan and Thailand. In the course of this dialogue, meetings have been held not only in the OECD Headquarters in Paris, but also in Korea, which has hosted three workshops, and in Singapore and Thailand, one each. More such meetings are planned. The dialogue reflects the growing importance of Asian countries in the world economy, their dynamism and achievements. The unique blend of countries in the Asia-Pacific region, representing many of the great cultures of the world, its languages, religions and much of its history, is fully acknowledged in the principle of dialogue. But, thus far, policy dialogue has been confined to economic affairs: trade, investment and so on. Now, we are for the first time including education in that dialogue. By education, I mean both work on educational policy, through the Education and Training Division of OECD, and educational research and innovation, through CERI. Not before time you might say, for is not education an integral and substantial part of the fabric of society and culture; is it not, also, the modern engine of growth as our economies come increasingly to consist of knowledge-based, knowledge-dependent industries, as labour market needs are increasingly expressed in terms of high levels of competence and no longer in terms of an undifferentiated mass of poorly educated, unskilled workers? Not only is education in the broadest sense increasingly recognised in all advanced societies as the foundation of the modern economy; its role in the overall development of the individual and of social, political and cultural life is of quite fundamental importance in every country of the world. We in education need no convincing of all of this, but the message has still to be fully translated through comprehensive well-integrated programmes of national and international development. That process has begun; it is more advanced in some countries, not least in those attending this conference, than others; its importance is widely acknowledged.

However, we are not here to beat our breasts, merely to tell each other how important education is in the modern world. That message, I say, has still to carry throughout society and not least into the workplace so that further education and training for the workforce as part of a larger strategy of lifelong learning becomes the norm everywhere. However, we will best carry the

message by taking up particular topics and examining the progress we are making, the obstacles we are encountering in achieving educational and wider social objectives.

This conference will have fulfilled its purpose if, on the one hand, it proves to be an open and creative ideas forum and, on the other, it assists all of us to gain particular insights into or to derive better ways of handling the tasks for which we are responsible. In today's world those tasks involve more knowledge and skill, more sharing of responsibilities, more team work, more collaborative effort and more international co-operation. If international education is to become a reality, whether in terms of research, development, student and staff exchanges, and the other aspects I have mentioned, we certainly need better structures, better policies, more, better and broader programmes which cross local boundaries and national borders.

The OECD, like other international organisations, is committed to the view that through international effort, no one need lose; all may gain. I would like to emphasise this point since, world-wide, a great deal of attention is being given by governments, business, unions, media, academics and others to improving and enhancing competitiveness within and among nations and regional groupings of nations. This is understandable, it is to a degree inevitable, and it has its benefits. Focus on competition has the potential to sharpen our perceptions, strengthen our resolve, raise our expectations and foster the quest for standards. But unbridled competition can also be immensely destructive and wasteful, producing inefficiencies, dividing individuals, groups and nations and inducing a sense of defeat and perhaps animosity in those who fall to the bottom of the heap. It is for reasons such as these that the OECD seeks to establish, by agreement, principles, procedures, "rules of the game", which enable all and not merely some members and their partners to benefit. OECD is above all else a learning society whose members, by freely exchanging information and ideas and contributing to the joint work of reporting on trends, monitoring, analysis and so forth, learn how to be more effective, to be more successful in both defining and achieving their policy objectives. At the same time, the OECD seeks to stimulate and harmonise its Members' efforts in favour of developing countries in the belief that the world as a whole loses rather than gains by the disparities and inequalities between richer and poorer nations.

Although the middle letter "E" in the acronym of our Organisation stands for "economic", the OECD works in several other fields as well: in science, environment, social policy, public administration and in education. Through our Education Division, Centre for Educational Research and Innovation, and Programmes in Institutional Management in Higher Education and Educational Buildings, all of them within the Directorate of Education, Employment, Labour and Social Affairs, the OECD maintains a large and varied programme of educational data collection, policy review and analysis and investigations and studies of specific educational issues. Its educational remit extends from pre-school to higher and adult education. In carrying out that remit the staff in education work closely with policy makers, administrators, scholars, researchers, teachers, with employer and union bodies and with a variety of community and professional groups across the 24 Member countries. The immediate results of the educational work of the OECD are fully reported, often in general distribution publications. But for its full impact one would need to study many aspects of educational policy and practice in Member countries -- and beyond.

Since we have provided background reading on the OECD, including a selected annotated bibliography, in the conference papers there is no need for me to go into further detail, but I do wish to draw attention to the essentially collaborative nature of work done in and through the OECD. Collaboration means extensive contact with national education administrations, and the other interests I have mentioned; it also involves relations with other international organisations, a point I shall return to in a moment. Member states, institutions and individuals participate in our activities because they choose to do so. Presumably they retain their membership and their interest

because the benefits that arise outweigh the costs. The educational programmes are all international; all demonstrate in quite practical ways the advantages of international effort in education.

The Pacific Circle Consortium and Other Forms of International Co-operation in the Region

The Pacific Circle Consortium is one of the several elements within or related to the OECD educational programme. Its work has not been closely integrated with that of the Organisation as a whole and one of the purposes of this conference is to address this issue. The PCC is self-financing and very largely self-regulating. It has had its own momentum and followed its own course. I very much welcome the opportunity this conference and the annual conference of the Consortium itself, which started the beginning of the week and will continue once our conference finishes, provides to review the relationships between the education work of the OECD as a whole and the PCC. Such a review is overdue and is made all the more necessary by the presence, for the first time, of all six DAEs in an OECD education meeting. The PCC has an important role to play in developing relations between the OECD and the DAEs and in helping to redress a balance within the OECD which has been heavily tilted towards the European theatre and the Eastern United States and Canada. In addition, the PCC has done outstanding work in developing, trialling and publishing school curriculum materials. This work should be better known by all Member countries of the OECD and by the DAEs and other non-Member countries in the Asia-Pacific region.

The OECD is but one of many international groupings of countries, several have a long and proud record of educational co-operation. I am personally familiar with the outstanding work done in this region over many years by the Asia and the Pacific Programme of Educational Innovation for Development, from its base in the Bangkok Office of UNESCO. I am familiar, too, with the activities of the regional centres in Penang and Singapore, respectively for science and mathematics and language curriculum development. The ASEAN Ministers have long since established educational links and, in its recently concluded meeting, the Asia Pacific Economic Co-operation (APEC) has decided to establish an educational programme. The World Bank, various development aid organisations, many of them in OECD Member countries, and a number of voluntary groups and informal networks have contributed substantially to educational development in this region. Last, but by no means least, I should mention the moves being made by most if not all countries in the region to enlarge and strengthen their programmes of student and staff mobility.

Taken together, all of these activities constitute a valuable array of programmes and activities, both national and supra-national, which aim to strengthen the education systems of the Asia-Pacific region. It is most important that steps be taken, by all of the major players, to ensure that these programmes and activities reinforce each other, that unnecessary duplication and competition be avoided and that scarce financial and human resources are used to the best effect. I don't envisage either an artificial combining of effort or a blurring of roles and responsibilities. But we need to know, collectively, what is happening and what is proposed. We need to identify priorities for any new effort and we need to maintain open communication. The OECD sees regional co-operation here, as in other parts of the world, and co-operation between regions, as extremely important. Indeed, rather too little attention has been paid, in the increasing supra-national regionalisation and globalisation of the world, to the role of education as a major factor in the formation and operation of regional development programmes. We are not so much in danger of duplication or overlapping of activities as we are of leaving huge gaps, of failing to address educational needs and priorities that would benefit substantially from co-operative effort.

Possible Direction for Collaborative Effort in Education

What are these gaps, and where might joint activity and effort best be focused? What might be our procedures for continued dialogue and for possible projects? These are among the questions which this conference must address and attempt to answer. Perhaps I can assist this process by suggesting a few areas where there could be both a convergence of interest within the Asia-Pacific region and useful results for a strengthening of regional and inter-regional co-operative endeavour. From reading both the papers prepared for this conference and from other sources, I believe there is need and scope for co-operative work in at least the following areas:

① In the broad field of *school curriculum and pedagogy* there is a widely shared concern about curriculum breadth and balance, about the directions and impact of values education and education for responsible citizenship, about school dropouts, repetition of grades and failure, about overall performance standards and pupil attainment and about rigidities within the educational system. Are schools becoming less effective, some critics are asking, and is there sufficient clarity about the goals and aims of schooling given the numerous pressures and demands? While sustained international curriculum development is a difficult undertaking -- but can be highly successful as the PCC has shown -- an exchange of information about the character and performance of school systems and systematic review and analysis of key issues could be of benefit. The papers prepared for this Conference are of great value in highlighting issues. The working groups will need to give them close attention and prepare recommendations which have both immediate utility and value for possible future co-operative effort.

② Turning to *higher education*, we note considerable pressure resulting not only from increasing demand for access, but also from the increasing attention governments are paying to higher education as an instrument of economic policy. Projected or actual shortages of high level manpower in key growth areas, the at-times conflicting demands of teaching and research and the difficulty of providing adequate levels of finance, not least for R&D, are among the recurring issues. The greater involvement of industry and commerce in R&D presents both opportunities and challenges to higher education and calls for new forms of institutional networks and for fresh approaches to governance and management. Policies adopted by some countries can lead to negative consequences for others ("brain drain -- brain gain"). Higher education is clearly a candidate for further international co-operation and collaborative work and we have recognised this in the new CERI programme on internationalising higher education. It is, however, at this level that institutions and faculty members enjoy the greatest autonomy and have their own quite extensive international networks. The OECD has recently done substantial work on problems and issues of institutional management as higher education becomes more international, on higher education and employment and on new structures and routes in higher education additional or alternative to universities, and on the international dimensions and roles of higher education. We see these, and the impending massification of a previously elite system, as topics that would benefit from workshops and seminars in this region.

③ A third area, closely related to higher education, but too often separated from it by a deep divide in terms of social status and resources, is *vocational, technical and further education* and *training for the work force*. The rapid economic growth in the Asian region has put severe strains on manpower supply; the concept of skills market

is coming to replace that of labour market, drawing attention to the increasing levels of skill and competence required for the new and expanding knowledge-based and knowledge-dependent industries; demographic trends are generally favourable in those countries which have available large cohorts of young and potentially productive people, but there will be need for ever higher levels of "education for competence". These trends point to the need for rethinking the educational and training requirements of middle-level managers, work supervisors and technicians. At the other end of the scale there remain large numbers of illiterate and low-skilled adults who are and will be unemployed and unemployable unless adult education and retraining are provided. The issues arising in vocational education and training and further education and training of the workforce have been extensively examined within the OECD; there is a rich reserve of expertise and data to draw upon. At the same time, rapid changes in the character of and requirements for the workforce in the Dynamic Asian Economies underline the benefits that could accrue from joint studies in this field.

④ The fourth area with potential for collaborative work is *teacher quality*, a term that embraces the selection and placement of teachers, their initial education and training, their continuing professional development and their conditions of employment and work. It is a truism that educational quality, insofar as we can significantly influence it, is in very large part a function of teacher quality. Yet in many countries teaching has ceased to be a highly attractive and well-regarded profession. Even where it remains so, there are issues to do with teacher supply and recruitment, the content and organisation of teacher education and training and the best ways of deploying the teaching force, that need to be addressed. Policy and practice in teacher education, both initial and continuing, have been the subject of numerous studies and collaborative projects in the OECD. Current work includes a series of school-level case studies, complemented by seminars of practising teachers and co-operative, cross-national reviews of teacher education programmes, the results of which will be shared by participating countries. There may be scope for enlarged participation in this exercise. At the very least, we would welcome an exchange of information on trends and policy issues.

⑤ All countries are faced with educational change and all are committed to a greater or lesser degree, to national or state-province strategies of development. In some instances, as shown in OECD's programme of national education reviews, these take the shape of large-scale *reform strategies* which include new legislation, a change in the balance of responsibility between central and local authorities, new approaches to educational finance, and changes in curricula, pedagogy and assessment procedures. A recent example of this is the review we undertook of higher education in the Czech and Slovak Federal Republics as part of our East and Central Europe outreach progamme. There is long experience, among the DAEs, of integrated and comprehensive educational development programmes set in the context of national development goals and procedures. In the past, in OECD countries, national development and educational development have not always been closely inter-related. Now, there is a gathering interest in the ways in which educational policy can facilitate and be brought into close relationship with economic strategies to overcome social problems. As a consequence, educators are challenged to rethink their goals, to open the doors of schools, colleges and universities to the wider world, to enter into partnerships with industry and commerce, and to meet public accountability requirements. The close ties between educators and the nation state are evident in these developments. OECD Member countries have nevertheless found great value in

sharing information and experience and in working on issues that are of common interest. There could well be mutual benefits from a widening of their dialogue, through participation of the DAEs in studies of selected topics.

⑥ A consideration of issues and questions arising in the foregoing five topics might suggest the need for a sixth. What alternative methods exist or should be created to assist young people to learn? Is formal schooling the only one, the best place? Are we over-zealous in formulating curricula and then insisting on ways of teaching and learning that minimise student choice and creativity? Conference views on these questions would be of great interest.

These are my five or six topics. They are not, of course, the only ones that might be identified and in listing them I am fully aware that I am inviting challenges and alternative proposals. That is just as well since we have the next three days in which to discuss and debate those aspects of schools, higher and further education that seem to all of us to be in most need of elucidation and of further work. The field of international education is large, it is diverse, and it is expanding. There is need for us to be better informed about these changes and to have more systematic ways of gathering and analysing data about educational trends and developments. I invite you, in this conference, to concentrate on topics and themes that seem to you to be best suited to a truly international exchange and a continuance and a strengthening of the dialogue upon which we are now embarking.

1.5 Casting a Net into the Pacific

The Pacific Circle Consortium: Its Experience, Developments and Vision

Mr. David Wood,
New Zealand Department of Education

Mr. Wood, former President of the PCC, introduced this paper, which explains the workings of the Pacific Circle Consortium. Mr Wood opened his address in Maori and English, adding his welcome to participants, and thanks to Hirsohima, Hiroshima University and the OECD.

We, the members of the Pacific Circle Consortium, have been looking forward with anticipation to this occasion for over two years. We are grateful for the opportunity to be invited both to contribute to its planning and to be members here today. We relish the chance to communicate something of our experience and vision in the field of international curriculum development, and especially to have dialogue with educators in Singapore, Malaysia, Thailand, Hong Kong, Taiwan, South Korea and from non-Consortium institutions in Japan. This conference has the potential to mark a turning point in our educational relationships and the directions of the Consortium.

It is therefore not surprising that the most recent programme decision of the Consortium to focus on Asian and Pacific studies, was activated by the decision to hold this international conference in which the Consortium could engage in dialogue with institutions from the Dynamic Asian Economies, together with the strong political interest within each of our governments to improve relationships with your countries. The outcomes of this conference could well affect the shape and development of this latest programme.

Introduction

Te Hao o te Moananui-a-Kiwa: Casting a net into the Pacific Ocean is the title of my address to you. The activity of net fishing is something the keen fisher looks forward to; it has a defined purpose; it takes preparation and effort; it involves the co-operation of others; it requires basic resources; and with the richness of the Pacific Ocean still largely untapped, its outcomes are never certain.

My overview of the experience of the Pacific Circle Consortium in the educational field of international curriculum and research development reflects this simple analysis of the experience of net fishing.

For those of us who are the participants, the Consortium offers an exciting, challenging and exploratory activity which seeks to allure the valued if elusive big fish of international and intercultural understanding among the peoples and the countries in and around the Pacific Ocean into the net of internationally collaborative curriculum and research development.

Co-operation between institutions from different Pacific countries is, of course, the essence of our activity. Currently, there are 16 active participating educational institutions in the Consortium.

Table 1

Participating Institutions

- Christchurch College of Education, New Zealand
- Curriculum Corporation, Australia
- Curriculum Research & Development Group, University of Hawaii, USA
- Department of Education and Training, ACT, Australia
- Department of Education, Queensland, Australia
- Faculty of Education, Hiroshima University, Japan
- Faculty of Education, Queensland University of Technology, Australia
- Faculty of Education, University of British Columbia, Canada
- Faculty of Education, University of Canberra, ACT, Australia
- Faculty of Education, University of Sydney, Australia
- Faculty of Education, University of Tasmania, Australia
- Faculty of School Education, Hiroshima University, Japan
- New South Wales, Department of School Education, Australia
- Tasmania Department of Education and the Arts, Australia
- New Zealand Ministry of Education, New Zealand

They include one national school system, a national body for facilitating and servicing national curriculum development, five state/provincial or territory education departments, and nine tertiary institutions.

The number of institutions taking part continues to grow. Until this year, participating institutions have been drawn from within the five Pacific OECD countries of Australia, Canada, Japan, New Zealand and the United States of America -- a product of our origins and history. Today, full participation is now open to educational institutions in all countries in and around the Pacific Ocean. As commercial fishers, we welcome the opportunity to widen our membership net and seek the advantages of securing a more varied and delicious catch of educational fish. The University of South Pacific based in Suva, Fiji, is our latest member.

Like the activity of net fishing, the Consortium uses simple resources -- essentially people -- and organisational structures.

And while its achievements have varied over the years, they are nevertheless tangible. As an active organisation of over 15 years' experience, the Consortium has shown that international co-operative curriculum development and educational research can be achieved. To varying degrees of effectiveness it has designed curriculum development programmes and projects; it has developed and published a range of quality resources and other materials; it has undertaken educational research on significant school-related topics; it has disseminated educational programmes, ideas and information; it has analysed and synthesised educational policy issues and ideas; it has designed and conducted professional development programmes; and it has influenced national and provincial curriculums.

History

The Consortium was established in 1977 as an innovative programme of the Centre for Educational Research and Innovation (CERI). It was the brainchild of Dr Malcolm Skilbeck. Seventeen years ago, Dr Skilbeck was appointed the first director of the newly-formed Curriculum Development Centre of Australia. From this position, he promoted the idea of a Pacific-centred consortium of like-minded educational agencies working together on activities at the cutting edge of curriculum and research development. After making initial contacts and circulating papers, Skilbeck brought together a meeting of members of the CERI Secretariat and representatives from the five Pacific OECD countries who were on the Governing Board of CERI. That meeting was held in Honolulu in 1977. The group developed a set of objectives and programme ideas that read as well today as they did then. They adopted the organisational name, Pacific Circle Consortium (PCC).

Table 2 provides a simple chronology summary of PCC experience during the past 15 years. It highlights three periods of development and the main programmes for each period.

You can read a detailed analysis of how the PCC began and its early history in the 1987 second Consortium journal of Pacific Education, which is devoted to a substantial article by Dr. Helen Connell called *Establishing an International Educational Consortium -- The Pacific Circle Experience.* An updated history overview of the Consortium has been prepared for this conference for those who are interested. The overview describes in more detail developments and issues in each of the three periods.

Table 2

Three Periods of Development

Date	Characteristics	Programme
1977 - 1985	Defining, refining, redefining identity, purposes, activities organisation, relationships	Common Project TOP I
1985 - 1986	consolidating, building, developing the organisation	TOP II
1989 - 1992	broadening, expanding, redefining activities and membership	Phase III (Technology) Phase IV Asia and Pacific Studies

Purposes, Programmes, Projects and Activities

I have already stated that the general purpose of the Consortium is to promote international and intercultural understanding and co-operation among the peoples and countries in and around the Pacific Ocean. Its more specific purposes are spelled out in Table 3.

The Pacific Circle Consortium addresses these purposes through a series of programmes, projects and activities.

Table 3

Purposes of the PCC

- To promote international and intercultural understanding and co-operation among the peoples and countries in and around the Pacific Ocean
- To foster learning and teaching about peoples and countries in and around the Pacific Ocean.
- To undertake international co-operative development and dissemination of curriculum materials and activities.
- To conduct international collaborative educational research.
- To explore educational policy issues and ideas.
- To facilitate the sharing of ideas, information, resources, materials and personnel among Pacific countries and their educational institutions.
- To design, develop and conduct professional programmes.
- To organise conferences and workshops on important educational topics related to the Pacific.

A programme is a major theme for Consortium undertakings. It provides the framework within which specific projects and activities are planned. A project is a particular task involving curriculum development or research work; and an activity is any other Consortium undertaking which does not meet that definition; for example, as well as research and curriculum development projects there have been various exchange and dissemination activities, experiments in telecommunications, journal publishing, and the development of a range of various other publications, all of which are designed to contribute to the broad purpose of the organisation.

The pattern of Consortium work has been to establish a programme in which most, if not all, participating institutions join. To attract support, the programme must be sufficiently flexible to allow each participating institution to develop materials relevant to its own learning and teaching situation. As you will appreciate, devising an appropriate programme involves considerable discussion, a willingness to find common ground among members, as well as sensitivity to each

other's situation. The conclusion of the Consortium experience is that this can be done, in spite of the restraints of distance, time, funding and institutional priorities and workloads. What we have secured is a sense of community that comes from working together on worthwhile projects with minimum resources. We now have the confidence and desire to share this worthwhile and stimulating experience with other countries and institutions to each other's mutual benefit and enrichment.

Table 4 identifies the range of projects and activities linked to the major programme of the Consortium.

The Consortium's projects and activities can be conveniently grouped into three categories according to the number of institutional participants. The most common is the multilateral project, developed among three or more participating institutions; a second type involves a bilateral relationship between two institutions; and, in some cases, one institution commits to undertake a project alone, referred to as a unilateral project.

The varying level of institutional participation in projects is illustrated by Table 5.

Outlines of the Consortium programmes, projects and activities are contained in the publication *Project Profiles*, copies of which are readily available at this conference. A fuller analysis is provided in the Connell and overview articles.

Work Style

Decisions about general and specific work programmes, projects and activities are made in a number of ways. Over the first decade the Consortium developed a continuing list of programme possibilities submitted by participating institutions. These suggestions were debated at the annual general meetings. Some were selected for action, some placed "on hold", and some dropped. This
process led to the development of the Common Project, and the TOP I and TOP II programmes and projects.

Phase 3 had a different origin. The initiative for this programme came from outside the Organisation. A request came from the Australian Education Council (a group representing the Ministers of Education from the Australian Commonwealth and States, and from New Zealand) for the Consortium to deliberate on the implications of new technologies for the school curriculum and educational policy in the Pacific region.

The Consortium has also commissioned members to present recommendations for future work. One such paper by Kip Anastasiou of the University of British Columbia led to a 1988 decision to increase attention to research and dissemination to complement the major focus in curriculum development.

We believe our meeting over the next three days has the potential to stimulate future developments.

The work programme of the Consortium then is continually evolving.

Table 4

PCC Programmes and Projects

Programme Theme	Curriculum	Research	Exchange/ Dissemination
The Ocean Project Phase One (Top I) 1980 - Wise use of Ocean Resources	* Bay and Harbour Communities of the Pacific * Ocean Fishing in the Pacific		
The Ocean Project Phase Two (TOP II) 1985 - Environments for Pacific Peoples	* Tourism * Coastal Zones * Forests	* Student Activated Learning (TOPSAL)	* Pacific Children's Communication Project (PCCP)
Technology Phase Three 1989 - Technology Initiatives in the School Curriculum	* Pacific Area Technology & Health (PATH) * Technology across the Pacific	* Research Collaboration in Technology Education (RECITE)	* Education Media Technology for International Understanding (EMTIU) * Technology in (TAP) The Schools (TISP) * Development Approaches in Science & Health (DASH)
Phase Four 1992/3 (?) Asia and Pacific Studies	* History of Asia & the Pacific	* Asia-Pacific Cultural Literacy	* Asia-Pacific Language Policy * Asia-Pacific Studies Database

Table 5

PCC Projects and Activities

Multilateral	Bilateral	Unilateral
* Bays and harbours	* Japan-Australia	º Curriculum Research
* Ocean fishing	Video Project	for Understanding the
º Forests		Pacific Area (several)
+Coastal zones	º The Antarctic Project	Japan Nearby (CDC)
* Tourism		
* TOPSAL		º Asia-Pacific
+PCCP		Literature Project
º Nearby series		
+Pacific titles		º EMTIU
+Pacific-Asian Education		º PATH
Journal		* TISP
* PCC Newsletter		º RECITE
* DASH		* Asia-Wise

º Local materials only + International (materials focus)

* Both local and international material

Procedures for the development of approved programmes, projects and activities have also evolved over the years. They are characterised by the early-established principles of work style, described by Connell in her journal article; namely, shared leadership and equal decision-making; co-operative interactive activity; low key/low resource activity; voluntary participation -- autonomy of choice and pragmatism.

The following diagrams from the TOP II work experience illustrate these procedures (see Table 6).

Table 6

PCC Lines of Accountability

TOP II

(TOP -- The Ocean Project)

Annual General Meeting

Managing Co-ordinating Institution

e.g. NZDE

Project Co-ordinating Institutions (PCIs)

Coastal Zones	Forests	Tourism	TOPSAL	PCCP
CRDG	UBC	BCAE/QDE	NZDE	NZDE

Project Development Groups (PDGs)

Coastal Zones Forests Tourism TOPSAL PCCP

PCIs and PPLS

Institutional Writing Teams

New Zealand Department of Education's participation in the tourism project shows how the lines of organisational management operate, see Table 7.

Table 7

NZDE Tourism Project

Pacific Circle Consortium

TOP II Environments for Pacific Peoples

(TOP -- The Ocean Project)

Tourism	Forests	Coastal Zones	TOPSAL	PCCP
Project Co-ordinating Institution				
Project Development Group				
NZDE Project Co-ordinator				
NZDE Advisory Committee				
NZDE Writing Teams				
Y12 Geography	Y11 Economics	Y6&7 Social Studies		

To develop project ideas and strategies, to put together materials and to trial these materials, each of the participating institutions works closely with selected schools and other educational agencies. The mix of university staff, government curriculum, research and policy developers, and school teachers and students is fundamental to our work style. We have found that it enriches, enlivens and authenticates the work. Consequently, numbers of students and teachers have had their horizons extended and their understanding of the peoples and countries of the Pacific deepened.

Formative evaluation has been a strength of the Consortium's programme, project and activity development. As the two previous diagrams indicated, a project is carefully evaluated as it proceeds through its various stages of development -- by the writing teams, by the institution's own advisory committee, by the project development group, by the project co-ordinating institutions, at annual workshops and at annual general meetings. Consequently, all projects undertaken by the Consortium are carefully evaluated by local, national and international working teams, enabling the final product to possess a wide authority and appeal.

Organisation

To carry out its activities as a self-sustaining organisation, the Consortium has developed and formalised a set of procedures and rules. These are encapsulated in the Consortium by-laws, which contain definitive guidelines on such matters as relationship with OECD/CERI, purpose, participation, the annual general meeting, officers and executive committee, programme, finance, conduct of business and amendment of by-laws. To support the underpinning principles of equity, co-operation and flexibility of participation, the statements have been kept deliberately inclusive and simple.

A policy handbook, freely available at this Conference, has recently been drafted to provide more detailed information to participants about the Consortium and its organisational structure and processes. In essence, it describes the Consortium administration. Features of PCC Administration at present are as follows:

- Respect of institutional autonomy.
- Each participating institution funds its own involvement.
- No annual fee to participate.
- Two major international meetings each year:

    a) annual conference, which includes the annual general meeting;
    b) annual workshop.

- Elected executive committee.

The autonomy of each institution to work within its own particular environment, its envelope of policies, and its internal organisation and dynamics, is affirmed. Because the Consortium has no central pool of resources, each participating institution funds its own involvement in Consortium programmes, projects and activities, and its attendance at conferences, workshops and meetings. There is no annual fee to participate. These factors combine to encourage each institution to monitor its involvement closely so that resources can be justified. They also compel any common activity that is undertaken by the Consortium to be relevant to the ongoing local work of institutions. One of the lessons we have learned about international curriculum development is that, to be viable, it must pay careful attention to local needs and situations.

The Consortium holds two major international meetings each year. The annual conference, which includes the annual general meeting, is the decision-making body of the Consortium.

All participating institutions have equal representation at this forum, which is hosted by participating institutions on a rotating country basis, usually in September/October. The host institution prepares the annual report of the proceedings of the annual conference and annual general meeting.

Responsibility for the ongoing business of the Consortium lies with an elected executive committee. All committee members are elected by the annual meeting to broadly represent the participants.

In late April or May, an annual workshop is held at a venue different from that of the annual conference, to further a phase of programme, project and/or activity development. Local

educators are usually involved in workshop sessions. Developments and decisions at workshops are reviewed by the annual forum.

The need for a permanent Consortium secretariat has arisen from time to time, together with a proposed levy on institutions to fund it. The consensus to date has been against such a policy, but it may become necessary if the Consortium continues to grow at its current rate and to have an increasing number of projects and activities in progress concurrently.

Connell in her article in our Journal, summarised the aims, values and principles of the PCC organisation as follows:

> ...a strong commitment both personally and institutionally to make the Consortium work; a willingness to share ideas and information and to support one another; an effective networking system; respect for the principle of co-operative consensus decision making; regard for voluntary participation, namely the right of each institution to participate as much or as little as it wished; equality of institutional participation; exploratory activity: that is, all activities explored first and appraised critically at regular periods; acceptance of self-regulating and self-sustaining responsibilities; pragmatic and entrepreneurial focus: the Consortium should tackle issues of concern to member institutions and tie the Consortium's work as clearly as possible to the existing work programmes of participating institutions; the Consortium should be a low key, low budget resource activity.
>
> (Connell, Helen, 1987. History of the Pacific Circle Consortium, *Pacific Education* Vol. I, No. 2)

Products/Outcomes

So far I have described something of the nature of the Consortium activity. Now I will look at some of the fish that our 15-year net has caught.

For a small group we have been productive. As I talk to people in other organisations about the Pacific Circle Consortium they are often amazed at how much we have accomplished with so few resources.

The Consortium's most visible product is the increasing number of quality resources that have found their way into the education systems and schools of participating countries. The Pacific Circle Consortium has proved itself effective in developing materials where there is a common need amongst several jurisdictions. Developing them jointly rather than separately spreads the costs, increases the human and material resources available to be drawn on, and fosters a breadth of viewpoint.

The Ocean Project (TOP I) programme has achieved a raft of curriculum materials. For example, the Bays and Harbours curriculum project for primary students has resulted in an attractive and educationally useful set of six harbour studies being published and used in local education systems: Hiroshima, Columbia River (Oregon), Hobart, Honolulu, Vancouver, and Wellington. They use text, colour slides, tapes, simulation games, maps and stories to convey the interaction between marine and human environments. An International Teachers' handbook has been developed as a comparison study to give students an opportunity to compare their home

harbour with that of Hiroshima, another nation and culture. Bays and Harbours has proved a rich and popular project. It has the potential to attract other interested participants with Pacific Harbour communities to develop their own local units.

The second project of TOP I, Ocean Fishing in the Pacific, has produced local materials and case studies for use in senior classes in Japan, Australia, New Zealand and the USA (Alaska, Hawaii, and Washington). Some, such as NZDE's "NZ Fisheries", have sold well locally. This project has also completed an international comparative study with the publication of an appealing four-volume set of booklets, and a stand-alone computer simulation game, Pisces. The project's co-ordinating institution, University of Hawaii, has agreed to evaluate the dissemination and use of the various materials in the contributing school systems, with a view to revising materials, possibly in four or five years' time.

The bilateral Antarctic Project (TAP), a co-operative curriculum development programme which involved the Tasmanian Department of Education and the New Zealand Department of Education (NZDE) has created 13 well-researched and attractive booklets on the Antarctic and Southern Ocean for use with middle primary to upper secondary school students. The development of this project was shared between the two institutions, with both in-country and cross-country trialling taking place. The Antarctic materials have sold steadily in Australia and New Zealand since their introduction several years back. The resources comprise story books, science studies, and social studies. To keep the project alive in schools, this year's workshop in Melbourne authorised the NZME to revamp some materials, updating them and arranging for reprints -- the first decision for a revision of a Consortium product to date.

A unilateral activity by the Curriculum Development Centre (CDC), (now the Curriculum Corporation of Australia), has spermed a spate of materials called the Nearby series. The series provide upper primary and junior secondary school students with useful and interesting information about the peoples and countries of the Pacific Basin. The project originated in Australia in response to a request made by the Japanese Embassy to the CDC. The project resulted in a publication entitled *Japan Nearby*, which was distributed to every secondary school in Australia. The publication caught the eye of the Canadian Consortium executive member who gained support for a similar project from the Japanese Embassy in Canada. The result has been a Canadian version, also entitled *Japan Nearby*, in both English and French editions, made available to every school in Canada.

Further products in the series include "New Zealand Nearby", and "Australia Nearby". "Hawaii Nearby" is close to completion. In addition, the New Zealand Department of Education trialled the Canadian version of "Japan Nearby" in local schools.

An interesting feature of this series is that research and writing for each study have been undertaken by a non-native of the subject country, with the manuscript being checked by the subject country for accuracy and authenticity. The bilateral co-operation that characterised this endeavour has provided the Consortium with a rich context from which important lessons about intercultural education and curriculum development can be learned.

Each of the TOP II Environments for Pacific Peoples projects and activities has achieved the publication of quality materials. The New Zealand tourism materials gained a NZ Tourism Award from the Minister of Tourism. The tourism project materials were launched in 1990 by New Zealand and in 1991 by Queensland. Resources on forests for local use in British Columbia, Japan and Hawaii have been available since 1989. A draft of the Coastal Zone atlas was presented to last year's annual meeting and is to be published early in 1993. Reports on the research

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TOPSAL project, Student Activated Learning (which elicited, collected and classified questions and ideas that students of the Pacific ask about forests), and on the interchange and dissemination Pacific Children's Communication Project (which explored the exchange of learning between various New Zealand school students and those from member Pacific countries) are available through the Consortium.

Materials are starting to emerge from the Technology programme projects. The Research Collaboration in Technology Education (RECITE) project, whose purpose is to investigate children's understandings of, and reasoning about, controversial issues involving science and technology, has collected data from over 5 000 children aged 12-16 in British Columbia. The information has been compiled from interviews and written answers relating to an issue presented in either a TV news or newspaper-type format. Permission has been given by the British Columbia Ministry of Education to use the materials internationally. The initiating institution of the Development Approaches in Science and Health (DASH) project has developed a varied and impressive set of curriculum materials. This project, which integrates science, health and technology curriculum for junior and middle primary students, is being trialled amongst several development groups, both in the United States and by government education departments, colleges of education and schools in the Australian Capital Territory and Christchurch, New Zealand. As part of the Technology in Schools Project (TISP) schools across Australia have contributed case studies of exemplary technology education activities in design and workshop technology classes. A second phase of this project has produced a booklet describing international case studies of exemplary activities concerned with staff development and retraining programmes, integration and interdisciplinary approaches, and resource initiatives. A third phase is now being planned; it will deal with assessment and evaluation of school technology programmes.

The Pacific Circle has also developed a range of publications for educational developers, teachers and students, other than curriculum materials. I have just mentioned reports arising from research and interchange activities. Another different sort of project, called Pacific Titles, compiled lists of basic books on the participating peoples and countries of the Pacific, both fiction and non-fiction, which were recommended by librarian teachers. This library project aims to assist librarians and teachers in developing their Asian-Pacific library collections.

During the second period of development, the Consortium journal, "Pacific-Asian Education", was launched. Regarded as the Consortium's flagship publication, the journal contains articles on educational topics important to Consortium members and relevant to our common region -- on research, educational theory and practice, policy issues, curriculum approaches and activities in the classroom.

In addition we publish a range of transient materials to provide information about the purposes, policies and projects of the organisation. All of these are freely available to interested conference delegates: the brochure provides a brief background to the PCC and is updated annually; the presentation booklet provides a fuller description of the PCC and seeks to answer common questions; a newsletter is published two or three times a year, providing current news and information about the Consortium; a publications brochure seeks to market our products; an annual report records the proceedings of each annual conference and annual general meeting; and a policy handbook provides the detail of PCC policies for participating institutions.

To recap:

The Consortium is a multipurpose organisation, where major emphasis is currently on curriculum development. This emphasis includes design, materials and resource production and dissemination, as well as general policy.

The PCC achievements can be summarised as follows. It has:

- designed curriculum development programmes and projects;
- developed and published a range of quality resources;
- undertaken research on a number of school-related topics;
- disseminated educational progammes, ideas and information;
- designed and conducted professional programmes;
- published an educational journal, newsletters and occasional papers;
- worked at the cutting edge of curriculum thought and policy.

Other Benefits

The Pacific Circle Consortium is an important organisation not only in terms of its material products but also in terms of the people that it brings together. It has provided a significant number of educators in the Pacific with direct experience of inter-institutional collaboration at an international level. It has provided rich experiences for individuals to work intensively with educators from other nations and cultures, from other systems and from other education agencies. Through its networks and its range of activities the Consortium has succeeded in moving many participants -- including teachers -- from a dominantly local outlook towards a more international perspective.

Tertiary specialists, teachers, curriculum developers and administrators have become professionally involved in varied contacts across national boundaries. Most of us visit abroad and attend international conferences. But rarely do we have the opportunity to actually work across national lines, defining common tasks and committing ourselves to complete these tasks. As participants in the Consortium we have come to know each other, to appreciate each other, to be able to learn from each other, to make compromises in order to reach common ground, and ultimately to find larger visions which diminish local/national bias.

Another benefit for individuals and institutions of participating in the Consortium has been access to Pacific-wide networks and communication systems.

For CERI, the Consortium has provided a model of a self-sustaining, self-regulating activity from among a group of member states within a particular region. The Consortium is a low-cost activity from CERI's point of view, and, apart perhaps from the initial few years of establishment, has a minimal servicing call on resources. The opportunity exists in this arrangement for CERI to play a more active role if it chooses, and to build a closer relationship between the Consortium's work programme and other CERI activities. The occasion of our gathering over the next three days promises to achieve this very thing.

Finally, from the perspective of international and intercultural education, the Pacific Circle Consortium has since its inception been making a statement about the importance of the Pacific region as a significant component of the school curriculum. It has been saying that knowledge about Asia and the Pacific is important. It has given practical expression to this

statement with the production of curriculum and research materials that can be used in classrooms to focus attention on the Pacific.

Summary of PCC Experience

Thus the Pacific Circle Consortium stands before this conference today with confidence. It has behind it 15 years of experience in international co-operative curriculum and research development. This has been achieved with little external funding or assistance, and without changing its fundamental features. It is experiencing a growing membership. It is gaining increasing recognition by significant international education agencies. There are undeniable prospects for expansion to additional Asian and Pacific nations. Now, 15 years later, we can judge Skilbeck's vision and the 1977 meeting, and its resultant plan, a success.

Future Directions

What are the possible directions for the Consortium as it moves towards the twenty-first century? Table 8 indicates some of the possibilities.

One pathway has already been forged: to address the demand for increasing quality Asia-Pacific studies in the curriculum. It is clearer now than it was at the first meeting of the PCC in 1977 that the Pacific region is an area of considerable strategic, economic and cultural importance to us all. In the words of a former chairperson, Professor Kerry Kennedy, the PCC message for the next decade must be that content about Asia and the Pacific in the curriculum is not just important for many students in our region, it is essential for all. This is a message that the PCC is well equipped to deliver to an international audience.

Table 8

Possible Future Pathways for PCC

1. Asia-Pacific studies in the curriculum.
2. To involve more countries and institutions in and around the Pacific Ocean.
3. To become bilingual, multilingual.
4. A multipurpose and multi-skilled organisation:
   a) more emphasis on research;
   b) concise policy papers;
   c) international student/school communications;
   d) interchange of curriculum programmes and resources.
5. Evaluation.

The Consortium has responded to some degree to Kerry's challenge by identifying Asia-Pacific studies as the next major programme of the Consortium. You may recall that four projects have been selected for this programme: a research project called Asia-Pacific Cultural Literacy, a curriculum materials development project, Asia-Pacific History, an exploratory policy project focusing on indigenous languages in the Asia-Pacific region, and an Asia-Pacific educational materials database activity. The details have still to be worked through, and we, the Consortium participants, would welcome the contribution of other institutions represented in this conference who may be interested in taking part in their development.

This leads me to reiterate the need for the Consortium to widen its membership net to include more countries and institutions in and around the Pacific Ocean. For several years our annual forums have heard repeated requests for the organisation to be inclusive of the whole of the Pacific, not just part of it. If the Consortium is to speak with more authority and authenticity on educational issues of the Pacific-Asia region, it must co-operate with and embrace a broad range of different Pacific and Asian institutions, experiences, resources and skills.

For this to happen, we should address and resolve effectively the important issue of language, to the satisfaction of all parties. Clearly, participation of institutions from countries in Asia, Central and South America and the Pacific Basin must lead to a re-assessment of the way the PCC operates and the priority it gives to its varied activities. I repeat. We welcome both the participation of institutions from all countries represented here today who are interested in supporting the purposes and goals of the Consortium, together with the challenges such participation might bring to our structures and activities.

And this brings me to the next area of growth for the Consortium in the 1990s.

In response to Professor Kennedy's call for a multipurpose and multi-skilled organisation, the Consortium has over the past few years gradually broadened its activities to include policy and dissemination activities and more research, while retaining its emphasis to produce high quality curriculum materials. This trend must be continued.

Research has the capacity to inform both curriculum development and curriculum policy. This message lies at the heart of the TOPSAL, RECITE and Cultural Literacy projects noted earlier.

Policy studies related to Pacific education should also occupy a firm place on the Consortium agenda for the 1990s. The Asia-Pacific Language project has the potential to debate language policy issues. Another rich area of policy analysis and synthesis which the Consortium could well tackle is the question of interpreting appropriately the cultural lifestyles, heritages and histories of one country within the school curriculum of another jurisdiction. Such is an important goal of the Asia-Pacific Cultural Literacy project.

Increased opportunities for students in one country to have dialogue with those in other countries of the Pacific and Asia is yet another development for the Consortium to advance. The Pacific Children's Communication Project has provided the Consortium with useful experience to draw on for such a development. Rapid advances in modern technologies make the prospect for this development both practical and cost effective.

And cost-effectiveness might encourage Consortium members to explore further the interchange of curriculum programmes and resources related to Pacific education. The Educational Media Technology (EMTIU) project and the Developmental Approaches in Science and Health

(DASH) project have attempted to trial curriculum resources developed in one location for adoption or adaptation in another. The opportunity now exists for this to be done on a broader scale as a way of maximising the resources available, taking advantage of multiple skills and talents, and internationalising materials.

These are just some of the possible directions to occupy the Consortium and its participants over the next several years. Other possibilities will undoubtedly be fired by discussions at this conference.

2. EDUCATION AS AN INSTRUMENT OF ECONOMIC AND SOCIAL DEVELOPMENT

2.1 A National Perspective in Education and Development

Mr Odd Eiken,
Under-Secretary of State, Sweden

There is no political area that is quite as national as the schools and the educational system of a country.

It is the schools which teach and preserve our language traditions. The school is the carrier and the most important reflection of a nation's language, its history, cultural heritage and, as a result, the soul and identity of a nation.

This is the reason why, however enthusiastic we may be towards internationalisation and harmonisation in general, most countries resent any outside meddling in their schools and educational system -- whether it be multinational or indeed supranational in form. And for many countries this even applies where national or state policies may be superimposed on an educational system that is by tradition governed by local, regional or provincial bodies.

It is a fact that there are few areas more local than the educational system. But, at the same time, it is no exaggeration to say that there are few areas undergoing such rapid internationalisation as education. Problems and challenges facing the educational system in most countries are remarkably similar, despite the local and national influence that educational policy traditionally has. Demands for greater quality in the system are being raised, at the same time as both costs and the complexity of the system itself are increasing.

This is one of the reasons why we are witnessing such rapid development of management, and steering policies of education. In countries with traditionally centralised systems -- such as Sweden -- this development is characterised by deregulation and decentralisation. Whilst in countries with decentralised systems, there is an intense discussion about the need for common norms and standards.

In this context we can also see a growing interest in studying the educational systems of other countries and the solutions they have found. It is not surprising therefore, that from a European perspective there is great interest in studying the problems, characteristics and solutions that you have arrived at here in Japan and the Asia-Pacific region. The reasons for this are evident. Today we all stand at the same cross-roads. We face the same challenges and the same need for new insights.

Let me mention some of these.

For the majority of us, our own history and wealth have proved the intimate relationship between a nation's prosperity and the quality of its educational system. This relationship is abundantly clear. And when this relationship is proved, education policies are no longer the

exclusive preserve of specialists and technicians. Educational policy has now become a central and strategically important area for the whole range of policy making.

The industrialised world knows very well that our prosperity could not have been achieved, and can not be maintained if we don't have breadth and excellence in our educational systems. Sweden, like Japan, has experienced one of the most rapid growth-rates of the twentieth century. And we know that this is closely connected to access to cost-free education with high quality. Other countries have had similar experiences. There is no reason to believe that the experience of Third World countries is or will be any different. The key to success lies here in building an educational sector that is cost-effective, productive and quality oriented.

The educational infrastructure, its standards, its flexibility are thus crucial for our welfare and prosperity. For this reason, interest in international studies and the exchange of experience in the educational area is increasing. The fact that we are speaking about education as a key factor in prosperity, of the same rank and importance as economic policy or the business climate, merely serves to underline the importance of international comparisons, of standards, quality indicators and comparative key figures in the area of education.

Looking into the future, we can see ahead of us a situation where there will be a rapid increase in the need for education, and at the same time an even faster increase in educational costs. Of course, this goes hand in hand with technological changes, changes that are themselves increasing our need for competence and intangible capital. Fewer and fewer companies today divide their labour force into skilled and unskilled employees. Instead they talk about the need for skilled employees, each and everyone with a robust, general education, relevant vocational training, and a lifelong career with in-service and on-going training.

But at the same time, we know that the life-span of knowledge is becoming shorter and shorter. During the last 50 years, our attitudes to work, careers and education has changed. Let me put it this way: our parents inherited their profession from their parents. We, in our generation, made a choice, but we chose for life. But future generations will, undoubtedly, be changing occupation, careers, professions and by this their competence a number of times during their active working life.

Furthermore, demographic conditions in the industrialised world are changing. Today in Europe 80 per cent of the work-force of the year 2000 is already in the labour market. And by that time around 10 to 15 per cent of the work-force will have to renew its skills and competence each year. This puts of course a heavy pressure on the educational system.

The educational system of tomorrow will have to be able to provide more educational alternatives, alternatives that will undoubtedly be more expensive. This is especially true of vocational training. Traditional education of young people must also to a growing extent be supplemented over time by internal training of adults within the framework of a concept of lifelong learning.

Overall then and on a broad front, this presents our educational systems with great challenges and increases the pressure on our systems to come up with new solutions and to increase productivity and cost-effectiveness.

In this context, some of the questions we must ask ourselves are:

- How can we develop an educational system that is sufficiently flexible for the rapidly changing needs and conditions that will exist on the markets in the future?

- How can we make sure that we get competent teachers, and how can this competence be maintained, when its very basis -- knowledge itself -- is changing at an accelerating rate?

- How can the costs of the educational system be kept under control, when the demand for its output is almost limitless?

All this means that we do indeed need reliable indicators of educational quality, efficiency and productivity. There are, of course, problems in measuring the value of a service that only becomes apparent 10 or 20 years later. Of course these complications and objections are true, but they are not a reason for not trying to develop indicators, norms and standards that help us to measure education and its return on investments more accurately. It is simply not reasonable to spend -- as industrialised countries do -- perhaps 10 per cent of GNP -- including internal training -- on an activity without actually having a clue of what we are getting for our money.

My country's government, like many others, attaches great importance to the work that is being done on educational evaluation through the framework of the OECD. This is an important complement to the work that we are doing ourselves on evaluation systems.

Internationalisation of education and all the issues that this brings about is also part of internationalisation in general. Many of those who are in school today are preparing themselves for a future where they may work in a number of countries and also communicate in a number of different languages. The school will of course continue to be a reflection of our national heritage, but it will also have to combine this, with the task of preparing the next generation for international careers and multi-cultural employers.

At the same time many of our countries are becoming more multi-cultural societies. Many countries have ethnic minorities. Growing mobility, immigration, refugee problems, and a labour market that is becoming increasingly international. This all imposes new demands and new requirements on all of us.

However, this is true not in the sense that we must cut the link with our own national characteristics and cultural heritage. Certainly not. Doing that would be fatal. What I am saying is that diversity, cultural openness and understanding of other cultures and languages should receive greater emphasis, but not replace traditional, local values. Transparency, rather than harmonisation, should be the key concept in education.

In many of our countries, we have also come to the conclusion that all these challenges make it necessary to look for co-operation from groups outside the traditional education community. Parents must have a stronger right and an obligation to be actively involved in the education of their children. In return the school must become attentive to parents and give families alternatives and choices. The school must also try to effectively use the experience and competence of the parents in the daily work of the school. With this aim in mind, we have now, in Sweden, introduced rules to give all parents the right to equivalent financial conditions when choosing a school for their children, irrespective of whether the school is public or private. Similar voucher systems are being introduced in a number of other countries. At the same time, we have to look for new ways of bringing about greater co-operation and integration between the educational system and industry.

We also need a more creative climate in schools. For long, it was said that if Gutenberg, the inventor of the printing process, had visited any printing house of today, his only remark should have been: Ah, I see you painted the walls. This is certainly not true any longer, with the revolution that the graphic industry has undergone during the last 10-20 years.

But a teacher of the nineteenth century would probably have said something similar. The teacher's bench, the desks, the whole design of teaching is fairly unchanged since the nineteenth century, and so is the lonely profession of teaching. Even though school has a responsibility to maintain a cultural heritage, it should not become a sector isolated from creative development and renewal of methods. On the contrary, this will be needed if we want to meet the new challenges.

Without going so far as to claim that I can describe reality in all the countries gathered here today, I would dare to venture that many of you do recognise some of the problems and trends I have been describing.

What this really means is that there is a growing need for an international dialogue concerning educational questions, a dialogue where we can exchange experiences and ideas -- a dialogue where we find common standards and a greater degree of transparency across our educational systems.

There are many fora for such a dialogue, but allow me to make two comments.

Firstly, we need fora where industrialised countries facing similar challenges and problems, can conduct a dialogue with their counterparts in different parts of the world. We have bodies to do this, especially regionally. In Scandinavia we have evolved a high degree of very useful educational co-operation, and now there is a growing European educational co-operation in the framework of the European Community and the Council of Europe.

I also understand that in this region -- the Pacific region -- you have ambitions of an increasing educational co-operation in the framework of APEC.

Regional bodies and co-operation are important. But, let us not for a moment believe that regional co-operation in the area of education is a substitute for the global dialogue. On the contrary, it could be dangerous if the trend towards regional co-operation weakens the global dialogue, while the marketplaces, the problems, and the challenges are to a growing extent international and not regional.

We need a dialogue between industrialised countries in Europe, Asia and America about education. We need to exchange ideas and experience and we need to create minimum standards, systems of comparison and evaluation. And for this important task, I know no better institution than the OECD.

My second point is this. Many contacts and fora exist for discussions about education on a technical level, not least within research areas, but there is a lack of fora for discussions of educational policy making. The time when technicians and specialists were involved in exchanges of experience, whilst the politicians were restricted to local or national debates, is now history.

I am a politician myself, so for that reason I might be excused for saying that politicians are also human beings, people who need fora for the exchange of ideas and experience, fora where they can discuss and debate openly these vital issues. I would also add that despite all the

international organisations of co-operation that exist, there is still a deficiency, there is still something lacking in this area.

It is my great hope that the discussions we shall have here in Hiroshima on educational policy between regions from all over the world, that these discussions will be constructive, open and full of ideas.

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2.2 Education and Economic Development in the DAEs

Shogo Ichikawa,
National Institute for Educational Research, Japan.

What are the factors contributing to economic success?

There are nearly 200 countries and independent economic areas in the world today. Some of them are Members of the OECD, while most of the others are regarded as developing countries. They have been making efforts to modernise their societies and improve their economies. Unfortunately, however, it seems that their efforts have not yet borne as much fruit as expected. The situation is different in a few of the East Asian countries, collectively labelled as "the NIEs" or "the DAEs". Naturally, the fact that they have been exceptionally successful in industrialisation has been claiming international interest. Let us review popular understanding of the factors which have brought impressive prosperity to those countries.

The first to be mentioned is their geopolitical advantage. Inherently, most of the DAEs have a mild climate and suitable locations for ports. Their lands are surrounded by water, detached islands or peninsulas and they have almost homogeneous populations. Therefore, they have had less difficulty in keeping away from the political pressure of neighbouring influential powers and from guerrilla attack. These happy situations have promoted political stability and social integration.

In the second place, they have had favourable economic environments. Since the end of the Second World War, they have belonged to the free market and accordingly they have had relatively easy access to advanced countries which are good customers. Moreover, the network of overseas Chinese merchants has been facilitating commodity and monetary circulation within these countries and they also have had the opportunity of obtaining financial aid from the United States and Japan.

Thirdly, they have cultural heritages. Most of the DAEs share the Confucian past. Some specialists in Asian studies consider that Confucianism has played an important part in forming "Confucian Capitalism", which has parallels with Max Weber's view that European Capitalism developed under the profound influence of Protestantism.

Nevertheless, all of the above-mentioned arguments have their respective little weaknesses. For example, Thailand is neither an island nor a peninsula. Singapore and Malaysia are not homogeneous but heterogeneous societies. Why has the Korean economy grown so remarkably where a minimal number of Chinese merchants have settled? Furthermore, Thailand and Malaysia do not have the Confucian past. Therefore, the reason for the success might more adequately be interpreted as a combination of most of those factors.

At the same time, there is another factor to be referred to that applies almost unanimously in the DAEs. It is people's attitude towards education. Traditionally, they generally have an academic bent and respect education, and it is often pointed out that manpower training for industrial needs, supported by their readiness, has greatly contributed to economic development in those countries.

What are the Features of Education in the DAEs?

Then, under what education and training systems have their manpower effectively learnt to work? Are their systems similar to or different from those in advanced European countries or OECD members? Those are questions that hold your interest.

From much the same viewpoint, I once made an attempt to compare Japanese education with education in advanced Western countries, and wrote a paper entitled "Distinctive Features of Japanese Education". What I would like to do now is to find out to what extent Japanese education and education in the DAEs are similar or dissimilar. Therefore, I would suggest a few questions which can be discussed in this session. There might have been some differences in education among the DAEs. Which features or characteristics that they share with one another are common or distinctive in comparison with Western societies? How rightly is their success in social modernisation and economic development attributed to their education? If we try to clarify those issues, I believe our discussion will be of great help not only to the OECD and the DAEs but also to other countries that are at an early stage in their economic development.

Why do the DAEs have Optimistic Views?

In reference to this aspect, it seems to me that the OECD countries and the DAEs do not necessarily concur with each other in the reliability of school education or in the opinion about how school education has performed its function so far and how it will be able to discharge its function in the future in social and economic development.

In the OECD countries, arguments against school education became predominant during the 1970s. In the early 1980s, they came to recognise education as one of the primary requisites to compete with other countries in economic success, and since then they have brought education to their keen attention. Nevertheless, their attitudes towards education still remain rather strict. They have suggested educational expenditure should be cut down or they doubt the accountability of education. After all, they basically place only little reliance on their education and therefore they often express various pessimistic views of the situation of education.

By contrast with school education of the OECD countries, school education in the DAEs has been treated favourably both at home and abroad. For the last two decades, they have valued education as an important factor of the modernisation and economic development in the DAEs. They have hardly ever hesitated to devote public resources to education and have consistently been anticipating good output from investments in education. They even tend to believe that it is wise investment in education that will lead a national economy to creditable performance.

This does not mean that education systems in the DAEs have been working perfectly. In their respective countries, criticism that points out defects in the education system is often heard. Nevertheless, I am led to perceive that the majority of general statements still take an optimistic view, because they report that people express great interest in education and the government treats issues of education as most urgent and actively organise educational policies to shift priority from expansion in quantity to improvement in quality.

How has the disagreement in view of school education between the DAEs and the OECD countries been brought about? What can account for the difference? Have the DAEs only been misled by the present economic success into optimism about education and so will they soon be disillusioned? Will the time come to them when the population is infected with "advanced

countries' syndrome" and their strong will to work is waning? Or do their cultural heritages save them from catching the disease and will their prospects remain unchanged? I would like the participants to take those questions into consideration.

Will Education Remain Effective in the Future?

Then, how has education effectively contributed towards economic success in the DAEs? It would be impossible to give a definite answer under the circumstances when common features of their education systems remain unexplored. In my rather presumptuous opinion, the DAEs have put emphasis on national solidarity and co-operation in their education, and the former has stimulated nationalism and the latter has improved productivity of work-forces. If I am looking at the question from a correct angle, education authorities in the DAEs have the following policy tasks to tackle.

For one thing, they will be expected to satisfy the requirements from the co-operation with their neighbouring societies. At present, the EC and North America are struggling on the verge of economic and political unification. Sooner or later, East Asian countries may also have to cope with such a challenge. On that occasion, nationalism in the DAEs which has supported their respective national integration may possibly retard co-operation with one another. The problem that may occur is whether education in the DAEs will be able to face the difficulties in forming a necessary common way of thinking, which could serve as an important infrastructure for co-operation and harmony over the borders.

For another thing, education may have to meet the needs of de-industrialisation. As mentioned previously, their education systems have been working well with respect to economic growth and industrialisation. It is in part because efficiency in manufacturing depends upon the discipline and co-operative mind of factory workers that a Confucian background is appreciated. In the twenty-first century, however, the DAEs as well as advanced countries will enter upon a new phase of economic development as they de-industrialise. Whether education in the DAEs will be able to afford to keep up with the economic and technological change is also of great concern.

2.3 National Development Policies for Education

2.3.1 The Australian Experience

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Background

Australian school education systems continue to undergo major structural and economic changes. As the Australian economy entered more difficult times in the late 1980s, calls for frugality, economy and accountability in education from politicians and the public, grew in strength. A new significance was attached to education as an instrument for economic reform and recovery.

The direct consequence in Australian government school systems began with quite vigorous reviews of the efficiency and effectiveness of their operations. Predictably, teacher union strength allied with parental support to some extent, protected schools from the economic consequences of this scrutiny. In almost all cases the result was threefold:

- a diminution and decentralisation of out-of-school support services;
- a devolution of functions and responsibilities of management to principals of schools and their communities;
- the emergence of collaborative national curriculum development.

It is not my intention to pursue the first two effects of changed economic and administrative circumstances. The diminution of centralised non-school services is now 'fact' in Australia. Centralised curriculum services for information provision, resource development, curriculum development, professional development in Australia, are now a "pale-shadow" of their former self. Schools are now left substantially to their own devices to seek, manage and fund these services. It should be noted however, that systems did not entirely relinquish control. Strong central curriculum policy statements have emerged in most systems to establish policy parameters for school powers. Related to this diminution of services is the devolution of management functions and responsibilities to schools. This movement built on the thinking and literature of business began with Peters and Waterman (1984). The language and ethos of business was translated and applied in part in the rhetoric of school management. The three 'E's of educational management became **efficiency, excellence** and **enterprise**. In addition, principals of schools in particular, welcomed the absence of close supervision, the declining influence of centrally prescribed curricula and financial independence. One influential author described the change in this way: "This movement recognises that each school has a unique culture; each principal has a distinctive style; each teacher operates in an individualistic way; every community creates an idiosyncratic environment for learning" (Beare *et al.*, 1989).

The function of **curriculum development** however, has remained problematic for schools and for systems. To satisfy the needs of mobile populations and transferability of certification across state systems, some national comparability in curriculum has long been sought by influential interest groups. In addition, despite the enthusiasm of the school-based movement in the 1970s it

also became apparent that schools did not have the time, expertise or often the inclination to take responsibility for creating and recreating the curriculum and indeed take the long-term responsibility for continuing to do so. The time consuming and costly nature of curriculum development and implementation by State curriculum branches was also revealed by a number of systems "efficiency" reviews.

Australian developments were also influenced by the more recent English, New Zealand and to a lesser extent, the USA experience. Through legislation and other devices, national governments in these countries sought to harness curriculum and related outcomes in the national interest. The processes in each country were however different and the difference is apparent in the structures that have emerged. The instrument of change in England, the 1988 Education Reform Act, was preceded by a decade of debate on the allocation of major resources, and much preliminary activity. In New Zealand, the government appointed a prominent businessman to lead a taskforce to provide a report back to the government within a year. The result became manifest in centralised curriculum policies with complete financial devolution to schools. The New Zealand reform model is in some ways more radical than England's. In the United States, a National Commission on Excellence in Education prepared the report "A Nation at Risk" in 1983 which was persuasive rather than directive in style. It specifically targeted substantial federally-funded programmes to provide incentives for local school systems.

Due to a variety of circumstances the Australian national curriculum experience is different in some fundamental ways.

Australian National Collaborative Curriculum Activity

In Australia two sets of circumstances already provided a ready structure for reform. The Australian Education Council (AEC) comprising all Ministers for Education has since 1936 provided an effective forum for national debate and decision making, and continues to do so. The Commonwealth Government had also used its substantial funds to influence curriculum outcomes through its Schools Commission and the erstwhile national Curriculum Development Centre. Both were abolished in the mid-1980s in favour of a more "equal-status" approach among all government and non-government school systems.

At the September 1986 meeting of the Conference of all Directors-General of Australian State Departments of Education, a paper entitled "National Collaborative Effort in Curriculum Development in Australia", drew attention to the duplication of effort, the variable quality and the escalating costs of separate curriculum activities in the States and Territories. This prompted the Australian Education Council (AEC) to assign a special task group of State Directors of Curriculum. The task of identifying areas of potential common interest, collaborative procedures, potential costs and time frames for possible national development activities. This activity was undertaken against a continuing background of increasing system costs, diminishing budgets, demands for greater educational accountability and continuing restructuring of government education systems' administration and services.

Significantly at this time, the Commonwealth's own role in curriculum and resource development was being redefined. A Commonwealth Government policy document "Strengthening Australia's Schools", also advocated collaborative curriculum approaches among the States as a means of addressing common educational, economic and social goals. A decision to proceed in this direction was approved by the Ministers of Education at the AEC in 1987.

In October 1988 the AEC embodied the concept of collaborative approaches to national curriculum development through the adoption of the Hobart Declaration of Schooling. The relevant parts of the declaration identified:

- common and agreed national goals for schooling in Australia;
- annual national reporting on schooling;
- the establishment of the Curriculum Corporation of Australia to facilitate national activity;
- improving the quality of teaching.

Whilst education is constitutionally a state responsibility and state individuality had always been highly valued, clearly the advantages of collaborative activity outweighed the disadvantages. The status of emergent national curriculum documents was made clear from the outset. They were to be a resource that would inform and guide system and school curriculum activity. Some systems saw them as having a more important role in the provision of curricula than others. The declaration acknowledged, "Their use will not be compulsory but where agreement is reached after full consideration then it is very likely that all government and non-government systems will use them".

Early Activities

As an initial exploratory activity the decision was taken to provide a general description or "map" of the general national curriculum scene and undertake a more detailed description of mathematics curricula in Australian schools. This was to be a preliminary to providing national statements. A small project team accomplished this unprecedented work within six weeks. The NSW Department of Education provided management and support services. The speed and economy of that work was significant in creating a positive climate for subsequent activity.

The general national curriculum "map" identified some inconsistencies in policies and organisational practices across systems that initially were a cause for concern. Many aspects have since been addressed in collaborative ways. The more detailed National Mathematics "map" however revealed a high degree of consistency across systems. Clearly, the preparation of a single national statement on mathematics was feasible and even desirable.

From this early work, much was learned about collaborative processes and products. The size, nature and politics of the tasks were better understood and subsequent collaborative projects have benefited from that experience.

A National Agenda for Collaborative Curriculum Development

The AEC identified eight major learning areas for collaborative curriculum activity:

- English
- Mathematics
- Science
- Studies of Society and Environment

- The Arts
- Health
- Technology
- Language other than English

As agents of the AEC the Directors of Curriculum group representing all Australian systems had custodianship of the early work. The facilitating administrative and publishing services required for the work were delegated to the newly-formed Curriculum Corporation.

The Curriculum Corporation

As a direct consequence of the AEC's decision to engage in national co-operative curriculum activities, Ministers of Education concurrently established the Curriculum Corporation. The Corporation is a company limited by guarantee. Ownership is shared by the Commonwealth and the State/Territory Ministers for Education (except for New South Wales). It subsumed the former Australian Schools Library Cataloguing Information Service (ASCIS), took on a selection of the defunct Curriculum Development Centre's publication list and commenced its operational life in May 1990.

The work programme of the Curriculum Corporation comprises three substantive activity areas supported by a business and administrative infrastructure. Its programme areas are:

- facilitating national curriculum development;
- publishing high quality teaching and learning materials;
- providing curriculum and library information.

The Corporation has now been in operation for four years. It is a "new" player in the national scene and it will take time for systems and organisations to adjust fully to its presence. The political decision of NSW not to become a member of the Corporation, has however weakened its impact and potential. This may soon be resolved. Yet, NSW continues to be a key participant in national collaborative processes through a newly created AEC Curriculum and Assessment Committee (CURASS) that is more widely representative than the Directors of Curriculum that it replaced.

Curriculum Corporation has emerged as the major publisher of school curriculum materials in Australia and a key facilitator of the work of CURASS. It is the publisher for all AEC materials and national statements and other materials that have national acceptance and application. Being in effect the only organisation with a national mandate and curriculum network, the Corporation attracts other projects that require a national perspective. Especially significant are a number of projects that focus on improving teaching and learning about the Asia-Pacific region.

The Development Processes

To accomplish the national curriculum agenda six developmental phases have emerged:

Phase 1: Mapping of current curriculum policy documents in all States and Territories and where necessary audits of learning resources or review of the literature in each area of learning.

Phase 2: Preparation of a development Brief undertaken by contracted groups with wide consultations to guide the preparation of the national statement and profile and resolve definitional and procedural issues.

Phase 3: Preparation of a national statement for the subject area for teachers in schools and a brief overview statement for the general community is undertaken by contracted groups or individuals. The subject statements are nationally agreed frameworks designed to support curriculum development at school and systems level. This process requires high levels of consultation with relevant groups.

Phase 4: The publication by the Curriculum Corporation of national statements in each subject area for educators and the community. The dissemination and implementation process is a shared task between State systems and national subject teacher associations and individual schools.

Phase 5: The preparation, trial, validation and publication of national profiles of student achievement is undertaken after or concurrently with each national statement. This work formerly conducted separately under the auspices of the Curriculum Assessment Programme has now merged as an integral part of the collaborative curriculum activity.

Phase 6: The identification, preparation and production of high priority national support materials in specific areas of need is the responsibility of the Curriculum Corporation. This is accomplished through the same highly consultative and collaborative processes that pervade the whole national agenda.

During the past three years of national activity the processes of developing statements and related materials have been subjected to continual adaptation to meet changing circumstance, rigorous timelines and tight budgets. Additional pressures have emerged when subjects such as Studies of Society and the Environment and newly emergent areas such as Health and Technology do not share the same degree of philosophical congruence as other areas of learning across the various Australian systems. Yet the unanimity and resolve of members of the AEC, the Heads of all agencies and the Commonwealth Department of Education, Employment and Training to complete the national collaborative curriculum agenda is firmer than ever. This is clearly related to the economic condition. Not only is there a need to provide national comparability in education, there is the added requirement to encourage higher achievement, particularly in curriculum areas that will not only improve students' employment prospects but also empower them to cope with changing socio-economic conditions.

The Future

The national approach has revealed some very apparent advantages that seem likely to ensure a continuation of national collaborative curriculum activity. The work to date:

(1) Avoids much duplication of effort and resources by curriculum personnel in the various systems.

(2) De-mystifies the curriculum and curriculum expectations for employers, parents and the general community.

(3) Assists local and national level monitoring and assessment of student performance.

(4) Provides enough national comparability in the delivery of the curriculum for students to move more freely from one system to another without disadvantage.

(5) Uses high levels of consultancy and involvement with a wide variety of non-education interest groups. The National Industry Education Forum and the Australian Council of Trade Unions and the National Council of Parents and Friends Association are particularly influential contributors.

(6) Identifies areas of achievable change in the curriculum for future development. The decision to include Health and Technology on the national agenda is especially significant in endorsing the status of these emergent learning areas.

(7) Has demonstrated the capacity to maximise the best subject curriculum talents in the nation.

(8) Identifies priority areas of the curriculum that are in urgent need of resource development to meet the specific needs of teachers.

(9) Provides opportunities to introduce across-curriculum policies, e.g. multi-cultural education, Asia education, gender, Aboriginal education.

Conclusion

The full impact of the national/curriculum agenda on schools is yet to be felt. Clearly, the approach taken in Australia is less threatening to teachers than in some other nations. Public and professional expressions of concern or discontent have to date been very few and negligible. Collectively, systems have avoided legislation and compulsion in favour of persuasion, pressure and specific support in achieving change. The emergent national statements and reporting profiles so far apparently are being received by teachers' organisations as providing enough flexibility for individual schools to continue to respond to their need for local adaptation and initiative in the curriculum. Also the national eight areas of learning do not equate with the entire school curriculum and there are obvious opportunities to add units and subjects for students with specific needs. Consequently the potential ideological confrontation with the notion of school-based curriculum development has not emerged.

The most contentious aspect of the national agenda is likely to be the potential use of national profiles as a part of a national reporting process. The profiles are in effect reasonable levels of expectation of children's performance at a given stage of their learning in each learning area. It is not yet well understood that the profiles are not intended to be instruments for testing and will not replace the methods of assessment which are now used by teachers. They will provide an additional reference which will help teachers guide their own assessment activities and make them more systematic, consistent and equitable. The profiles can also help schools provide information to parents and the community in a more useful way. The potential use of profiles statistics for national reporting however generates concerns that approaches similar to that used in the UK for example, may be replicated in ways that may make comparative judgements about students, teachers and schools that may disadvantage some categories of students and communities. This requires some reassuring information and advocacy for teachers and the general public.

The AEC has determined with some urgency that the developmental aspects of national statements and profiles will be complete by 30 June 1993. At that time the development work on national statements, community statements and profiles would be ready for the publication and dissemination processes to commence. The national agenda in 1994 would focus on implementation, professional development of teachers and the development of innovative and exemplary teaching and learning resources. If accomplished, this would complete virtually in one decade a cycle of development that will significantly unify and strengthen the curriculum in Australian schools.

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2.3.2 The Singapore Experience

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Introduction

Countries in the Asia-Pacific region, despite differences in economic development, nevertheless share a common environment. Increasingly, the importance of co-operation and mutual support across national boundaries is being felt. One common theme is national productivity. National productivity hinges on an educational system that is organised, relevant and adequately supported by resources not only within the country but amongst Asia-Pacific neighbours.

As was stated in the communiqué of the meeting of the Educational Committee of OECD at Ministerial level on high quality education for all, the 1990s "should be a decade of continuing reappraisal, modernisation, and reform, recognising the scale to which the provision of education and training has grown... The challenges of the twenty-first century will not be met in a spirit of 'more of the same'" (OECD, 1992).

This paper briefly describes the experience of Singapore in educational development and educational research, international co-operation in educational research and some personal reflections on educational research priorities.

Educational Development in Singapore

From quantitative expansion to excellence in education

The educational development in Singapore since the Second World War has been reviewed in a recent publication 'Evaluation of Educational Excellence', edited by John Yip Soon Kwong and Sim Wong Kooi (1990). Singapore has progressed from the high illiteracy rate in the immediate post-war years to a near total literacy in the 1990s. It has moved from a policy of quantitative sufficiency in the 1950s and 60s to qualitative consolidation in the 1970s.

Education policy took a new direction towards even greater qualitative focus in the wake of the Ministry of Education Study Team's report in 1979, popularly known as the Goh Report after the then Minister of Education, Dr Goh Keng Swee. His Study Team noted two particular weaknesses in the educational system, namely 1) the ineffective bilingual policy (compounded by the lack of a clear definition then, of what constituted "effective bilingualism") and 2) the problem of high educational wastage in the system.

There was a need for a flexible educational system that developed the vocational abilities of those pupils who would not be greatly helped by a largely academic education. The development of a flexible educational system was therefore an important policy of the New Education System (NES) implemented in Singapore after 1979. Other problems identified by the 1979 Study Team were the great variation in the academic performance of Singapore schools, the low morale of teachers and the ineffective leadership and procedures of the Ministry of Education.

It was in response to some of the fundamental issues raised in the Goh Report that the then Prime Minister, Mr Lee Kuan Yew, in his official reply to the Report, spelled out for the first time, in clear and explicit terms, the "simple objective" of education in Singapore. This was:

> "...to educate a child to bring out his greatest potential so that he will grow to be a good man and a useful citizen" (Lee, 1979).

As to what was implied by "a good man and a useful citizen", Mr Lee went on to elaborate:

> "...the litmus test of a good education is whether it nurtures citizens who can live, work, contend and co-operate in a civilised way. Is he loyal and patriotic? Is he, when the need arises, a good soldier ready to defend his country? ...Is he filial, respectful to elders, law-abiding and responsible? ...Is he tolerant of Singaporeans of different races and religions?" (Lee, 1979)

Bilingual Policy

Schools in Singapore cater to all races. The bilingual policy ensures that each child is proficient in his mother tongue and aware of his cultural heritage. The mother tongue could be Mandarin, Malay or one of the Indian languages.

The New Education System (NES) implemented After 1979

Streaming

The new education system (NES) in 1980 introduced streaming "to provide an opportunity for less capable pupils to develop at a pace slower than for the more capable pupils". In addition, it would "allow a child every opportunity to go as far as he can". Its purpose was to reduce the educational wastage of the child not meant for academic endeavours. Streaming would help to ensure that he acquires basic literacy and numeracy, as well as preparation for training in a skill. On the basis of such a rationalisation, streaming was introduced in 1980 for primary 3 pupils into normal bilingual (N course), extended bilingual (E course) and the monolingual (M course).

At the secondary level, the implementation of the NES resulted in the creation of three secondary courses of education: the Special, the Express and the Normal. The Special Course provided opportunity for the student to be effectively bilingual at a high language level (first language level). In the Express Course, the student is effectively bilingual but only one language is at a high level, the other language is at a lower level than that of the first language level (second language level). The Normal Course differs from the Express Course in that the secondary education is completed in five years instead of four.

Gifted child programme

In line with the educational objective of maximising the potential of every child in Singapore, the Gifted Education Programme (GEP) was introduced in 1984. Specifically, the aim of the GEP was to provide the intellectually gifted child in Singapore with an educational experience that is best suited to his ability and aptitude. There were just over 1,000 pupils in the programme in 1990, comprising less than half a per cent of the cohort at the primary and the secondary levels.

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Curriculum Development Institute

Curriculum development was directed at supporting the changes introduced by the NES. The Curriculum Development Institute of Singapore (CDIS) was established in 1980, and charged with the role of developing teaching materials of all kinds. With its formation, the Education Development Division of the Ministry was disbanded. At the same time, the Singapore Education Media Service (SEMS), whose function was to produce educational television programmes and audio-visual aids, was incorporated into the CDIS as the Division of Educational Technology within the Institute.

Management of schools

Developments aimed at improving leadership and procedures within the Ministry of Education and the management of schools led to the establishment of the Schools Council. This was established to involve schools and principals in the decision-making process and two-way communication. The trend towards greater decentralisation in education management has resulted in principals being given greater responsibility and authority. Apart from assuming total responsibility in the guidance, supervision and assessment of teachers, principals have also been made responsible for the development of schools.

Towards a Balanced Curriculum in the 1990s

A further review of the primary school educational system was carried in 1990. The distribution of curriculum time was studied and compared with that in Japan and Germany. It was found that in the latter two countries, language took 30 per cent and mathematics took 20 per cent of the curriculum time. Singapore differed from these two countries in that its pupils had to deal with two languages (the mother tongue and English, the working language) and not one. In order to balance the time spent in learning languages, it was decided to have a pre-school year devoted to learning the mother tongue. It was also decided to defer streaming to the end of primary four, instead of primary three and that every child go through six years of primary education following the preparatory year, with differing emphasis on the study of the mother tongue depending on ability.

To accommodate these changes to be implemented, primary education from 1992 will therefore consist of a three-stage, seven-year primary education with the following programme:

a) At age five, pupils will attend a one-year preparatory programme (pre-school). This will help compensate for differences in language ability prior to admission to school. The preparatory year will serve to raise pupils' level of proficiency in English and the mother tongue to prepare them for formal primary schooling and to inculcate in them sound Asian values.

b) All pupils will receive six years of primary education following the preparatory year. The first four years of primary education (foundation stage, P1-P4) will focus on building a strong foundation of languages and mathematics. The curriculum time in P1-P4 has been revised to set aside 33 per cent curriculum time for English, 20 per cent for mathematics and 20 per cent for other subjects, and retaining the present

allocation of 27 per cent for the mother tongue and moral education. Pupils will be streamed formally at the end of four years to one of the three language learning streams but parents will have the final say as to which stream they want their children to attend at P5.

c) In the next two years (the orientation stage, P5-P6), pupils will join one of the three language learning streams according to their abilities. These are:

i) English as first language and mother tongue as first language;
ii) English as first language and mother tongue as second language; and
iii) English as first language and mother tongue for oral proficiency.

A fourth stream offering mother tongue as first language and English as second language will be made available if there is demand.

It is envisaged that academically able and linguistically talented pupils (about 10 per cent) will offer both English and the mother tongue at first language level, while the majority (between 70-75 per cent) will learn English as first language and the mother tongue as second language. On the other hand, less able pupils and those weak in the mother tongue (estimated at 15-20 per cent) would do well to offer English as first language and the mother tongue at oral proficiency level. These pupils could then focus their attention on learning English and mathematics. With less stress on the mother tongue, their curricular load will be considerably reduced and more time will then be available for the learning of these two basic subjects.

d) All P6 pupils will take a modified PSLE which will assess their suitability for secondary education and place them in an appropriate secondary school course, namely, the existing Special/Express course and Normal course, the latter to be expanded to include a new technically-oriented option (Normal (Technical) course) which will give pupils wider educational choices.

For about 80 per cent of pupils in P6 learning English as first language and mother tongue as first or second language, the present requirements at PSLE will remain unchanged. These pupils will take four subjects: English as first language, mother tongue as second language (oral and written), mathematics and science. In addition, pupils who learn English and mother tongue at first language level may take an additional paper, mother tongue as first language. Pupils who attain the necessary standards will, as at present, be admitted to the Special/Express or Normal stream in secondary schools. Pupils in the lower ability group (about 20 per cent) will take only English, mother tongue as second language (oral) and mathematics at PSLE, and will be admitted to the secondary Normal stream if they attain the requisite standards.

The modification of the PSLE will be a major improvement to the primary school system. While it will maintain standards in education, it will also accommodate the less academically inclined who do not proceed to secondary education under the present system. With this change, more primary school leavers will attend secondary school. This, together with six years of primary education (excluding the preparatory year), will give pupils at least 10 years of general education up to the secondary level.

(Ministry of Education, 1991)

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Consequent on the 1992 improvements at the primary level, appropriate modifications will be made at the secondary and post-secondary levels. Pupils will have four-five years of secondary education but with different curricular emphases. The more able pupils will be placed in the four-year Express/Special course whilst the rest will be placed in the four-five year Normal course as at present. To cater for pupils who are less academically inclined, a technically-oriented option will be introduced within the Normal course, to be known as the Normal (Technical) course. Both the Normal (Academic) and Normal (Technical) courses will lead to the N-level examination at the end of four years with a fifth year leading to the O-level examination for the more able of these pupils.

In the Normal (Technical) course, pupils will take as compulsory subjects, English, mathematics and computer applications (focusing on keyboard skills and use of software packages) and offer these in the N-level examination at the end of four years. Those who are able can do an additional year for the O-level examination. These pupils will thus be better prepared to continue their education and training at the VITB institutes.

For post-secondary education and training, the junior colleges will continue to attract the academically able students who seek a more rounded education leading to the A-level examination in preparation for a university education. The polytechnics will continue to admit bright students with technical and commercial inclinations. More opportunities will be provided to enable polytechnic graduates to pursue degree courses at the university. Besides giving training to this group of students who take this alternative route to university, the polytechnics will continue to perform their principal function of training middle-level personnel with technical skills.

Vocational Training

The Vocational and Industrial Training Board (VITB), established in 1979, promotes, provides and administers vocational training. It conducts institutional training for school leavers, registers apprentices and offers part-time continuing education and training programmes for workers. VITB is responsible for setting of national skills standards, the conduct of public trade testing and the certification of skills. It conducts full-time programmes in some 45 courses at 15 training institutes and had an average enrolment of 16,049 trainees in 1990. In 1991, VITB upgraded itself to become the Institute of Technical Education (ITE). To match the improvements to primary education and the provision of at least 10 years of general education up to the secondary level for more pupils, the VITB's new mission is to provide post-secondary technical-vocational training to meet the needs of secondary school leavers and the economy.

Higher Education

Objectives

Higher education is available presently in two universities and four polytechnics. Universities in Singapore have three objectives:

1) to provide the trained manpower which Singapore needs for its further economic and social development;
2) to raise the intellectual tone of our society; and
3) to act as a benchmark in maintaining high educational standards in Singapore.

(Tan, 1991)

The National University of Singapore

The National University of Singapore (NUS) was established in 1980 through the merger of the former University of Singapore and Nanyang University. It organises its 50 teaching departments under eight faculties, namely Architecture and Building, Arts and Social Sciences, Business Administration, Dentistry, Engineering, Law, Medicine and Science. In addition there are four postgraduate schools for Medical Studies, Dental Studies, Management Studies and Engineering as well as two specialised institutes for research and advanced training, namely, the Institute of Systems Science and the Institute of Molecular and Cell Biology. Other non-faculty teaching departments include the English Language Proficiency Unit, the Chinese Language and Research Centre and the Department of Extra-mural Studies. It has an excellent library.

The Nanyang Technological University

The Nanyang Technological University (NTU) was established in 1991 as a reconstitution of the Nanyang Technological Institute. It has five schools namely, School of Civil and Structural Engineering, School of Electrical and Electronic Engineering, School of Mechanical and Production Engineering, School of Accountancy and Business, and School of Applied Science. Engineering courses place emphasis on engineering practice. Engineering and Applied Science students undergo a ten-week in-house practical training and a six-month industrial attachment programme during their course of study.

The Polytechnics

The Singapore Polytechnic founded in 1954, is the first polytechnic to be established in the country to produce middle-level and supervisory personnel for industries. It offers full-time and part-time studies leading to advanced diploma, diploma and certificate qualifications in the various fields of engineering, business and nautical studies. The Ngee Ann Polytechnic trains practice-oriented people for industry, commerce and other economic sectors at the diploma, advanced diploma and certificate levels. The Temasek Polytechnic offers diploma courses in Design, Business and Technology. The Nanyang Polytechnic was established in 1992 to cater to business management, health sciences, information technology and engineering; health sciences studies include physiotherapy, radiography and nursing.

The Institute of Education

The Institute of Education (Chen, 1989) is the only training institution in Singapore which offers professional pre-service programmes for the training of teachers as well as in-service programmes for the further training of qualified teachers. In July 1991, the institute and the College of Physical Education together became the National Institute of Education of the Nanyang Technological University. The Institute offers a two-year full-time Diploma in Education programmes for GCE 'A' level holders and a one-year full-time Postgraduate Diploma in Education for university graduates. The in-service programmes offered by the Institute for qualified teachers include the Diploma in Education Administration (Primary and Secondary), designed to prepare teachers to function as effective principals and vice-principals, and the Further Professional Diploma in Education (Primary and Secondary), which provide training for teachers to function as effective heads of departments in primary and secondary schools. The Institute also conducts postgraduate programmes, leading to the award of the Master in Education and the Doctor of Philosophy. It is also charged with the responsibility of promoting research in education and teacher education.

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In-service teacher development programmes are also conducted in the higher institutions of learning. One key group are the new teachers, who are more receptive to such teaching development programmes than their senior colleagues. There is now greater recognition of the importance of such programmes in preparing the teacher to teach as well as honing his teaching skills. Dr Cham Tao Soon, speaking of the teacher training courses in Nanyang Technological University recently (Straits Times, August 6, 1992) said, "With the more formalised, more intense courses, they will lecture better, do tutorials better and deliver instruction better. It will be like a diploma course in university education".

The Open University

At a joint Ministry of Education-Singapore Institute of Management (SIM) press conference held on 9 June 1992, it was announced that the Singapore Institute of Management (SIM) has accepted the Ministry's invitation for it to run the Open University Degree Programmes (OUDP) (SIM, 1992). SIM has tied up with the Open University (UK) for an initial period of five years. During this period, OU (UK) will advise and assist SIM on degree structures, adaptation of course materials and the teaching and presentation of the OUDP courses. It will also monitor the standard and rigour of the courses. Students who complete the OUDP courses will be awarded degrees by OU (UK). In order to ensure high standards, and ultimately a qualification with economic value to the working adult, the minimum entry requirement to the OUDP courses has been set at two "A" levels or a recognised diploma. Applicants must also be at least 23 years old and have a minimum of two years of working experience. SIM expects to start the OUDP with a first intake of 500 students and depending on demand, increase its intake gradually to a total enrolment of around 6,000 by 1998. The Ministry of Education has given the assurance that the OUDP degrees will be recognised by the Public Service Commission (PSC) for the purpose of employment in the civil service. As for the private sector, acceptance of qualifications from overseas institutions is entirely at the discretion of the individual employers. Such acceptance is invariably based on the reputation of the institution concerned and the quality of the candidate.

Educational Research in Singapore

Three phases of development

Looking retrospectively at the last 25 years, three phases can be identified. The first phase from 1965 to 1972 can be described as a period of initial awareness of the need for research and testing. This was followed by a phase from 1973 to 1980 of intermittent activities and a third phase of 1981 to the present of more intensive activities.

In the second half of the sixties, a Research and Statistics Division was set up at the Ministry of Education. One of the objectives of this unit was to provide continuous feedback on organisational, curricular and examination matters with reference to the goals and objectives of the educational system. During this period, much concern was placed on the achievement of curriculum objectives, wastage, dropouts and truancy and the sociological and psychological aspects of language learning. Hence, many of the studies dealt with these problems.

As this was a time when a massive teacher training programme to meet the needs of schools was in force, a major study on the motives for teaching was conducted during this period. This was a landmark in educational research and testing in Singapore as it was the first large-scale study involving more than two thousand teacher-trainees in four language streams and four

different types of training programmes. The opportunity to further one's education was the first ranking motive for both male and female teachers. Opportunity to serve society was ranked second and third places for male and female teachers respectively.

The next phase of research development coincided with the expansion of secondary education with its implications of teacher training programmes. It was also at the beginning of this period that the Institute of Education was established and was entrusted with the research function as part of its mission. Topics researched included reading habits, aptitude tests and factors related to language performance.

The years from 1981 can be described as a phase of intensive agenda, during which a large number of research and testing reports appeared. The range of research topics included issues related to streaming, language policy, examination and testing; cognitive and social development of pre-school children; language education; curriculum evaluation; and teacher evaluations.

Master of Education dissertations represent a sizeable contribution to educational research and testing in Singapore. Since the implementation in 1983 of the revamped MEd programme with its emphasis on empirical research, more than a hundred MEd candidates have been admitted on an average of 20 each year, some sponsored for full-time study by MOE. Of the 119 dissertations completed or being completed by the 1983-89 MEd candidates at IE, 52 per cent were on various aspects of the school curriculum, 10 per cent on educational administration, and the remainder on classroom management, self-concept and others.

The inception of the Educational Research Association in 1986 with its major thrust in school-based action research has given educational research another boost. The objectives of the Educational Research Association are stated to be as follows:

1) to promote the practice and utilisation of educational research in Singapore, particularly in the schools, with a view to enhancing the quality of education in Singapore;

2) to seek to improve the training and facilities for educational research personnel in order that their expertise could be used for educational improvement;

3) to promote critical discussion into problems, methods, presentation and use of educational research;

4) to seek the dissemination of educational research findings to both the education and the wider community via journals, newsletters, conferences, workshops, etc.; and

5) to facilitate closer ties with the international research community.

Educational research in higher education

There is some advanced research in higher education. Several papers from Singapore were presented in the Educational Departments for Higher Learning Conference organised by the Institutions of Higher Learning in Singapore in association with the Higher Education Research and Development Society of Australasia (HERDSA).

In the 1990 National R&D Survey, in the higher education sector, the main areas of R&D activity was in engineering and medical sciences. R&D expenditure in these fields accounted for 44 per cent and 31 per cent respectively of the R&D expenditure in this sector.

(NSTB, 1990)

Research environment

On the educational research environment in Singapore, S. Gopinathan and M.S. Gremli had this to say:

> "Our examination of the educational research environment has revealed that there is both a recognisable body of educational research and a growing community, both interested in and intending to continue with research. This positive prospect, however, is clouded by certain limitations in the research infrastructure, notably the small impact of research on policy and the need to build greater collegiality and networking among researchers. We are therefore guardedly optimistic about the prospects for enhanced and productive educational research activity in Singapore" (Gopinathan and Gremli, 1988).

International Co-operation in Educational Research

The geographical location of Singapore as well as its membership of ASEAN provides numerous opportunities for both informal and formal international co-operative educational ventures and educational research.

One important organisation in this part of the world is the South-East Asian Ministers of Education Organisation (SEAMEO). Although much of the activities have been in development and subject research, there was some educational research work done. Of organisations dedicated to research, one international grouping is the South-East Asian Research Review and Advisory Group (SEARRAG) formed in 1982. Singapore is one of the founder members. The group has since produced its first of several reviews on educational research with the title of Educational Research Environments in South-East Asia.

Educational Research Priorities

Educational research has a place in the development of excellence in education. It can provide objective answers to the impact of educational policies. It can provide answers to empirical questions crucial to the structure, process and outcome of educational efforts. What are the priority areas in educational research? The following are some personal reflections.

Research Infrastructure

The first priority is the development of a research infrastructure. There is a need for a rapid practical course for those interested in embarking in research work, whether large or small scale. Research takes up resources. Wastage of time, effort and money can be avoided by good grounding of researchers. Asking answerable research questions, use of appropriate research designs are all important basic skills to be learnt well by every researcher. Such courses can be run

independently or co-operatively by countries. This may be one area of co-operation: international research methodology courses.

Research Environment and Networking

The second priority is development of a research environment and linkage across countries. This is in place to a varying extent in countries of the Asia-Pacific region. Opportunities for further development could be discussed at this Conference.

Research Agenda

The third priority is the development of a research agenda. There are many potential areas for educational research. The following are some such areas.

Educational policies

It is likely that some of this type of research is being conducted in each country. The results of this type of research however are also likely to be classified compared to other types of educational research. Nevertheless, research questions that are applicable to many countries could be raised and comparative analysis be made through collaborative studies. Some of the research can be historical documentations and critiques. The body of this type of educational research will enable present and future politicians and educationists to know the sort of educational policies to avoid because they have failed before. More importantly it is useful to know which policies have been found to work.

School-based action research

This is another area of research potential. The focus is on the school and may cover administration, performance of its pupils, school projects and innovations. It could focus on structure, processes or outcomes. Knowledge of the micro-environment of the school will be useful to principals and teachers on the ground, just as knowledge of the impact of educational policies will be useful to policy makers. Such research will yield information of immediate use to schools.

Learner-related research

This type of research provides the information for the provider of education to meet more closely the needs, difficulties and expectations of the learner and his significant others. Possible research questions range from factors determining effective learning, learning difficulties, learning experiences of pupils of different abilities and the motivation to study. Knowledge of factors that determine ability in multiple language learning have practical applications: there is no doubt that the ability to master languages besides the mother tongue is an important individual asset in the years to come as countries of the Asia-Pacific come closer together as a region.

Teacher-related research

Just as learner-related research is important, so is teacher-related research. The motivation to teach in Singapore amongst teacher trainees has been studied. It is also important to know what are the experiences, successes and difficulties that teachers encounter in their work.

How does the teacher stay on the job? How can adverse effects like burn out be prevented? The answers to these questions are vitally important in keeping the teacher "fighting fit".

Pedagogical issues -- teaching methods and testing

The effectiveness, pros and cons of a particular teaching method could be evaluated in different settings. The effectiveness of particular teaching methods to different teachers or students could also be studied. There is also much that can be evaluated objectively on the value of formative and summative assessments as they relate to different disciplines, educational levels and ability of pupils. Old and new ways of assessment can be subjected to the rigour of research to see their true worth. Are essay questions worthless? What is the usefulness of MCQ questions? What is the value of the OSCE (Objective structured clinical examination) in clinical medicine? Can OSCE be used in other disciplines? Some answers are available but some questions are as yet unanswered.

Self-directed learning and problem-based learning are modern educational paradigms. How can they be made effective to learners? What are the educational skills that must be imparted before students can effectively make use of these paradigms? Again, these are questions that have not been completely answered.

Conclusion

Singapore has moved from a country of high illiteracy in the 1950s to near total literacy today. The last decade has seen strides being taken to introduce a quality focus in the educational system. The learning of the mother tongue has its foundation in the primary school. Continuing education and higher education are freely available with the objective of providing the trained manpower which Singapore needs for its further economic and social development. Educational research is a mission of the National Institute of Education and is being given increasing emphasis in its education and development programmes.

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2.3.3 The Korean Experience

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Changing Trends in Educational Environment

The population growth of Korea will slow down, with its annual growth to reach one per cent by 2001. With the active involvement of the government in population control, the average birth rate, which stood at 2.4 per cent in 1990, will be down to 1.6 per cent. The improvement in maternal/child health will lower the infant death rate and the improving diet will lengthen average life expectancy.

Despite the incremental decline of population growth, there will be a net increase of 600,000 per year, adding 5,000,000 mouths to be fed by 2001. Therefore, population continues to be burdensome.

Population growth also brings about the change of population structure by age, which poses meaningful implications for politics, the economy, society, culture and education. The population pyramid will resemble a jar. Those under the age of 14 will decline in relative numbers, while the economically active population from 15 to 64 and aged people over 65 will increase markedly.

The population of elementary (6-11) and secondary population (12-14) will decline proportionately, but their absolute numbers will be sustained at current levels. This does not mean an additional burden of education cost. Neither does it suggest the possibility of reducing it. It presents an ideal opportunity to extend free, compulsory education to nine years and to provide for the qualitative improvement of education.

Another dimension of changing population structure is urbanisation. So long as industrialisation continues and agricultural productivity increases, population migration toward cities will continue. Sixty-nine per cent of the total population are in urban areas in 1991 and this population will rise to 73 per cent in 2001. This trend foretells that large and middle-sized cities will flourish during this period.

Table 1

Population Differentiated Between Urban and Rural Areas in Korea
(%)

Regions	1981	1986	1991	1996	2001
Urban	57	64	69	72	73
Rural	43	36	31	28	27

While population migration towards cities continues, with the frequent turnover of jobs, migration within a city will take place more frequently. Population congestion in some areas and its unbiased distribution will become a new matter of concern from the educational viewpoint. Regional disparity of education quality and education expenditure and irrelevant programme content will remain overriding concerns of educators.

Higher standards of living, more years of schooling and the development of mass media have increased the proportions of the middle class, which formed the mainstay of democratic society. A citizen's participation in the political process is not only through voting; it is through the organisation of interest groups that masses of people have direct participation in the political process. This participatory system also provides the mechanism of supervising and controlling the government and policy makers.

Living in the era of science and technology, scientific thinking and reasoning are the essential qualities of people. Education should do its part in instilling these abilities at earlier stages of development. It is also important to ensure that scientific thinking be instilled in their ways of coping with political, social and economic problems.

Policy Directions

Education for the whole person

The effect of education is manifested in the change of an individual, which is caused through interactions between an aggregation of individuals and the environment. Despite education essentially being a social process, school education is a one-sided imparting of knowledge through the medium of textbooks. The weakness of knowledge-oriented education is that it hampers a balanced development of qualities that shape a good character. Intelligence, aesthetic sensitivity and health, none of these can be neglected in education of the whole person.

Rote learning will disappear from educational scenes, as much of verbalisation and memorisation will be done by computer. Instead, education will focus on the part of learning which cannot be dealt with by computer, namely high-mental processing skills and character building. It behoves educators and teachers to bear in mind that they should teach something more than subject matter, with primary concern for personal growth in terms of social maturity and character-building.

Upgrading of education quality

Educational content should be reformed in view of new needs. The explosion of new knowledge and information calls for a periodical reform of curriculum based on research findings and field trials. The instructional process should shift from highly labour-intensive, lecture-bound teaching to the use of various methods utilising media and instructional materials. Learning experience may be diversified by directing greater attention to discussion, group learning and independent study. Teaching methods may well be differentiated according to the developmental stage of the learner and individual needs.

Enhancing the quality of education also makes it necessary to reform the teacher training system, enhance the socio-economic status of teachers, and improve working conditions. In this

connection, evaluation should be reformed, with a search for new evaluation tools to assess human growth in terms of human character.

Equal access to quality education

The common notion of equality is associated with economic equality. The gap in access to equal educational opportunity is as much destructive of the unity of people as economic inequality.

Educational opportunity is in principle open to everyone. In reality, however, equality in access to education is curtailed by entrance examinations, disparity in educational content and educational conditions, social status, locality, sex, age, and the ownership of schools. Continuing education beyond elementary education is dependent on the economic ability of parents. Particularly, children from needy families are disadvantaged in continuing education. The programme of secondary education is highly tailored to meet the needs of the entrance examination. The unfair apportionment of educational resources gives rise to regional disparity of education quality notably between urban and rural areas.

Equal access to quality education does not necessarily mean access to the same educational conditions. Educational goals need to be varied according to individual aptitude, value and personality and this can be achieved through the diversification of the educational programme.

Modernisation of educational environment

Prominent problems associated with educational condition are over-sized schools, over-crowded classrooms, the double shift system and high teacher-student ratios. The growth of school population outpacing the expansion of physical facilities makes it difficult to try new content and methods. Lecture-bound instruction is the dominant scene of instruction in the over-crowded situation with no room for the adoption of individualised instruction. There is no possibility of creating a humane relationship between learners and teachers and consequently the school environment is increasingly dehumanised.

The first step to be taken to create an adequate educational condition is to reduce the class size so that a sufficient amount of face-to-face interaction may take place in the teaching-learning process. In this connection, efforts should be made to eliminate uneducative elements existing in the environment.

Development of human resources

As a means of laying the foundation for producing high-level manpower, the basic sciences receive growing recognition at all school levels. Much needed is a continuing stream of research activities to develop teaching staff, to enhance the effectiveness of teaching methods and content and to improve facilities. The effective development of human resource requires that school be linked to industry in a complementary relationship. The need is growing to provide vocational education at an earlier stage of development.

The growing sophistication of industrial structure and the continual advancement of technology heighten the importance of enlarging opportunities for in-service training. The diversification of educational programmes serve this purpose; evening classes, vocational programmes, correspondence courses etc., await to be developed for the workers who are not able to continue formal schooling.

Three Major Issues of Educational Development

There is a strong demand for reforms in current primary and secondary education for national development in Korea. Throughout the 1970s and 1980s, there have been varied and complicated attempts in education reforms to have a better life and to get an advantage over international competition. Educational policies have been criticised in that they have been torn between goals and means, between equalisation and excellence, and between tradition and reform.

Diversification of secondary education

Diversified expectations of education. In the past, the learners' group reflected the homogeneity of their socio-economic backgrounds. This reflects the simplicity of the past society as well as the selective intake of students to schools. Coming to the present turbulent society, social structure is increasingly complicated, giving variety to the socio-economic status of people. The learners' expectations of education mirror their socio-economic status. Hence, what they expect of education is diversified. With the present educational system marked by stereotypes and rigid operation, it is impossible to meet the diversified expectations of education.

Recently in Korea, remote learning systems, season schools, on-the-job training, free choice of programme which allows students to transfer between schools, accreditation of adult education etc. have been introduced.

Diversification of schools. As high schools are diversified in kind, it is convenient to classify them into general and special high schools. General and vocational high schools belong to the former and the latter includes arts high schools, foreign language high schools, athletic high schools, schools for gifted children and special schools for handicapped children. While the former serve regular students, the latter are distinguished by specific goals or specific target groups. There are many general schools yet to be converted into special schools. Some will have to be converted into comprehensive high schools which are known for the combination of general and vocational streams. The former should have their quality upgraded, if they are to serve students bound for higher education. Since the latter should retain a vocational orientation, linkage with industrial firms is considered a key factor to determine the quality of education.

The special school is known for flexible orientation depending on the needs of the clientele. Flexibility extends to selection of students, graduation requirements, qualification requirements of teachers and curriculum. The school for gifted children, for example, is characterised by high standards of curriculum and equipment. To retain the academic excellence of programmes, the participation of colleges is necessary.

Greater emphasis on quality control calls for so much flexibility in entrance, graduation and duration of study. There is no need to specify the time of entrance and the duration of programmes. Operational flexibility requires that new sets of criteria be developed to guide operations. The criteria may vary with the unique needs of the clientele even within the same course.

The functions of high school education need to be examined in the context of reforming the school system. The high school programmes are geared to preparation for the entrance examination to colleges. A question is raised as to whether the role of the high school should remain linked to entrance examinations or not. An answer to this question should be sought in

relation to the goals of higher education. If higher education were intended to perpetuate scholastic excellence by making it accessible to a few, the high school should keep the quality of its programmes high for that selected few. If higher education were oriented toward vocational preparation, high schools should reform their programmes in a way that ensures relevance to industrial needs.

Development of manpower

Growing importance of vocational education. With the proliferation of new jobs, the present educational system is questionable in terms of its relevance to emerging manpower needs. In relation to manpower needs, the educational system may be considered in quantitative and qualitative terms. The problem in quantitative terms is manifested in the imbalance between supply and demand. The qualitative concern is with whether an educational programme is relevant to the performance level requirement of a job.

With the scheduled extension of compulsory education and the rising enrolment in high school, vocational education emerges as an area of new concern for those destined to join the labour force after graduation from high schools. Unless they are channelled into a productive stream, they will be condemned to a dead end. The effect of vocational education will further strengthen when it is coupled with proper career guidance.

Diversification of occupational training. The vocational high schools and occupational training institutes are the major source of technical manpower. The functional specialisation of vocational high schools was promoted by classifying them into the mechanical high school, the demonstration technical high school, the special technical high school and the general technical high school, with emphasis placed on machinery, electricity, construction, and metallurgy. Occupation training programmes are of various types; by ownership, there are public training and in-plant training. The problem is that there is no clear distinction between school education and occupational training programmes. The government-initiated programmes, prevail relative to the shrinkage of private institutes. Given the limitation of the government-initiated programme, the need is acute to encourage the participation of the private sector. There is a need to establish a mutually complementary relationship between schools and the private training system.

Relevance of the vocational programme in high school. The dichotomy of high schools between academic and vocational programmes is not desirable in view of new needs looming over the horizon. A vocational programme which includes career guidance should become an essential element of curriculum, which applies to all students. The vocational programme should encompass broadly-based contents, not limited to a specific technology but designed to enable students to adapt effectively to changing job situations.

Unlike the parochial nature of the conventional programme, its contents should be pervasive to cover not only skill but attitudes, ethical aspects, managerial skills, human relations, quality control and safety measures. Task analysis should be built into the vocational programme to reflect industrial needs on a continuing basis, with efforts being made to ensure a balanced treatment of skill, theory, and shop practice.

Improving the quality of vocational education teachers. Currently most teachers of vocational subjects are graduates of science or engineering colleges who have little or no pedagogical background. In-service training has been reinforced but its effect is limited due to the absence of incentives for the vocational subject matter teachers. The present qualification system should be revised to give due credit for industrial experience or licensed skill in qualifying for

certification as a teacher of a vocational subject. The custom of placing excessive value on educational attainment should be done away with, while introducing meritocracy to qualify for employment and promotion. In order to attract able teachers, incentive measures should be devised.

Quality education in equal opportunity

Symbolic value of education. The recognition that education is the most potent factor to determine the socio-economic status of people is prevalent in Korean society. The symbolic value of education represented by the highest level of school attended is the major consideration in employment, promotion, assignment to duties, and earning. The social and economic value of schooling is remarkable and that of higher education in particular is disproportionately high. This tendency will continue to dominate the social climate of Korea unless special efforts are made to reverse it within the educational sector or by employers.

The occupation of parents appears to be an important factor for progression to college or university. The gap in opportunity for higher education is also noticed between urban and rural sectors. The income level of parents is another important variable. Another indication to draw to attention is the difference in enrolment between urban and rural sectors. Even within the same bracket of income, a higher enrolment ratio is evident in the urban sector. Those from the rural sector are disadvantaged, due to additional burdens of financing room and board, in attending college. It is safe to say that there are other factors than economic reasons to work against access to college in rural areas.

A recently conducted study revealed that ability and social factors had equal impact on the opportunity to continue higher education and that the latter exerted greatest impact with the passage of time. This trend will continue with more prominence unless special policy measures are taken.

Support for education. The expenditure on higher education is borne by its beneficiaries. This principle also applies to the secondary school in Korea. Therefore, the financial burden imposed on students is significant.

Scholarships for needy students will be a key to the solution of the problem of an excessive burden on beneficiaries. But the number of scholarship recipients is still minimal. While the criteria for scholarship granting are student achievement and financial status, the former often takes precedence over the latter. The scholarship will have a limited effect in terms of its contribution to the equalisation of educational opportunity. It is urgently needed to institutionalise support for needy students. The creation of an "education support fund" will provide a shot in the arm for those who have to give up schooling for economic reasons.

Financial aid, however, is not enough to ensure equality in educational opportunity. Attention needs to be directed to those who are handicapped in access to education due to employment or obligation to earn for the family. There are physically handicapped children who have not been mainstreamed in regular schools. To ensure them equal access to education, financial aid should be accompanied by making schools open to them.

Educational opportunity has been diversified by the inauguration of air and correspondence high schools, air and correspondence university, industry-affiliated programmes, open universities and so forth. These are a significant departure from formal schools in that they are easily accessible by the people who were denied equal access to formal education in the past.

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Shifting away from formal schools, more resources should be devoted to the expansion of non-formal education facilities, while improving the quality of their educational programmes.

Gap among schools. Regional disparities are prominent in facilities, teachers and cost per pupil of primary schools. Worthy of attention is the gap in audio-visual equipment between urban and rural areas.

The same can be said of middle and high schools. In the provision of physical facilities, urban schools have twice as much as rural schools. And in terms of teacher's experience and professionalism, urban schools excel rural schools.

To ensure equality in education, the gap among schools should be eliminated, particularly on the secondary level. The policy to eliminate the gap between high schools has been promoted, cognisant of problems resulting from the "first-rate school fever". It has been limited to large cities with the abolition of the entrance examination to high school. Equalisation should be promoted in the direction of improving educational conditions, including physical facilities, equipment and the quality of teachers.

Supplementary education. With the increasingly diversified backgrounds of pupils, Korea has reached the stage which brings the need for supplementary education to the fore. Remote areas and peripheral rims of cities are disadvantaged in access to quality education, calling for supplementary education to put their children on par with their counterparts in other areas. Policy should provide for the institutionalisation of supplementary education for these areas and accord priority in the distribution of educational resources. In the final analysis, this is an effort to equalise the outcome of education.

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KOREAN EDUCATIONAL DEVELOPMENT INSTITUTE (KEDI) 1979. The Long-Term Prospect for Educational Development 1978-91 (English version), Seoul: KEDI.

This book's aims were to examine the challenges Korean education is likely to face and to identify the major tasks that policy efforts should be directed to achieve. In the process of this work, as many as 250 policy-makers and scholars took part, with a view to reaching a consensus of opinion regarding the future course of action (250 pages).

KOREAN EDUCATIONAL DEVELOPMENT INSTITUTE (KEDI) 1985. Korean Education 2000 (English version), Seoul: KEDI.

This book was organised as a report to the Korean Government for long-term national development. The book reviews past and present Korean education and suggests the development direction by assessing problems and needs and presenting policy tasks to be carried out (421 pages).

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2.3.4 The Malaysian Experience

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Introduction

The Malaysian education system was formally established when the country gained its independence from the British Government. The basic structure resembles that of the English primary and grammar schools, inherited from the Government English School during British colonial rule. When the newly-formed government which was to take over the administration after independence was formed, it recognised that the multi-ethnic, multi-cultural and multi-religious society in which different ethnic groups have been co-existing for several decades under British rule, needed to be moulded to become a united and progressive nation with an identity of its own. It was then recognised that the process of unification of society could be achieved only through a formal system of education which can nurture common ideals and patriotism. The underlying objective of the system of education was then, and has remained, the unification of its multi-ethnic society. Subsequent development has seen the country shaping its education system for economic development, specifically fostering the training and development of skilled manpower needed for the nation. A predominant force which is of no less significance, influencing educational development and reform in Malaysia, like everywhere else, is the awareness and public demand for an education which is relevant and meaningful for its developing society. Hence, educational development and reform in Malaysia have always been closely tied to the ideals of the government in maintaining a unified nation forging ahead towards a progressive and economically developed nation suitable for its times. Education policy has always been encapsulated with the economic and development policies, as stated in documents that outline development plans of the country. Today, Malaysia is shaping its educational system towards forging ahead and ensuring a progressive Malaysian society in the coming decades, as stated in its development plans (Government of Malaysia, 1991a, 1991b).

This paper will outline the development of the Malaysian education system, reforms undertaken, and present insights into educational policy and research priorities as well as international co-operation in educational research.

Educational development: a historical review

At the time when the British established their rule in Malaya, the Malay States already had the roots of a multi-ethnic society, due to the fact that Melaka had been a thriving commercial centre since the fifteenth century and had attracted many traders from China, India and the Middle East. These traders over the early years, came to trade, spread religion, intermarried and intermingled with the locals. British rule, however, had sown a different kind of multi-ethnicism, when they imported Chinese and Indian labour to work in the then new commercialised sectors of tin-mining and rubber, and practised a policy of "divide and rule". The immigrants came then as transient groups seeking their fortune with the intention of finally returning to their home countries.

The main objective of British rule was economic. Hence the British colonial government gave priority to economic development, specifically tapping the natural resources available at the time. Education did not appear to be of prime importance. It was provided by various interest groups, including the British Colonial Government itself, with different motives. The British Colonial Government set up schools mainly to ensure a steady supply of support staff for its

administrative service. This later developed to become a system to provide elite education preparing lower administrative officers subservient to the colonial government, although ironically it also became the training ground for the earliest statesmen who ultimately took over the rule of the country from the British.

At the same time, Christian missionaries established their own schools in their effort to spread Christianity among the people. Both the Government English Schools and the Missionary Schools were modelled on the primary and grammar schools in England, with English as the medium of instruction. They were also the most structured and organised, providing education up to secondary level. The British Government also set up Malay schools for the Malays, basically to ensure that the Malays were literate and became better farmers and fishermen. Their curriculum included gardening and handicraft, as well as the three Rs.

The Chinese set up Chinese schools for their community, with the curriculum oriented towards, and teachers imported from, China. As for the Indian community, the majority of whom were in rubber estates, schools were provided in Tamil by the estate owners mainly to keep the children occupied when their parents were at work.

In addition, the traditional religious (Quranic) schools, which had been in existence in Malay communities before the coming of the British, continued to function especially among the rural Malays, giving semi-formal religious instruction with orientation towards the Middle East. These later developed into semi-formal Arabic schools using Arabic as the medium of instruction.

As can be seen, the education available was varied, and the system fragmented, allowing for diversity in all aspects, be it in its orientation, curriculum or medium of instruction. In actuality, there was no single educational policy or direction. There existed at least five different orientations. In effect there were in existence, five different school systems for the three main ethnic groups. The Malay and Arabic schools were for the Malays, Chinese schools for the Chinese, and Tamil schools for the Indians. The Government English and Missionary Schools were open to all ethnic groups, but because of their location, mainly in the town centres, where the Chinese dominate the population, their enrolment was predominantly Chinese.

After the Second World War, the British Government, urged by rising awareness and patriotism especially among the indigenous people, and political developments in China and India, which had radically changed the position of immigrant Chinese and Indians in the then Malaya, saw that education could be identified along ethnic lines, which did nothing towards uniting the people. As a start, two committees, namely the Barnes Committee (1950) and the Fenn-Wu Committee (1951), were set up to look into English and Chinese education respectively, the two most developed systems at the time. The recommendations were legislated as the Education Ordinance 1952, which suggested forming a unified school system.

However, as has been mentioned earlier, it was the newly formed "Malayan" Government on the eve of independence, realising that they had inherited a multi-ethnic and multi-cultural society with a fragmented system of education, which set out to establish the national system of education. It was acknowledged that the very nature of the fragmented system of education, besides the British policy of "divide and rule", had created the plural nature of the society.

The first task undertaken by the new government was to set up an Education Committee, headed by the Minister of Education, the Honourable Dato Abdul Razak bin Hussein, to look into the matter. Soon after, a second committee headed by the second Minister of Education, the Honourable Encik Abdul Rahman Talib, that is the Education Review Committee, set up to review

the implementation of the first Committee report, was set up. The recommendations of the two reports, popularly known now as the Razak Report (1956), and Rahman Talib Report (1959), which had taken into account the recommendations of the Barnes and Fenn-Wu committees, were incorporated into the Education Act of 1961, which remains the Magna Carta of the Malaysian education system to this day.

To ensure a smooth transition, the Education Act was to be implemented gradually in the first two decades of independent Malaysia. In January 1973, the Education Act was extended to Sabah and Sarawak, which had joined the Federation of Malaysia in 1963.

Basically, the Education Act prescribed a policy for the establishment of one national system of education with an orientation to a Malaysian outlook for all ethnic groups in the country. This called for the abolition of the different school systems existing at the time, and the establishment of the National Schools. The structure of the English schools was adopted. The National Schools were to have a common content syllabus, a common system of examination, and the adoption of Malay, the national language, as the medium of instruction. However, realising the importance of English as an international language, it was to be made a compulsory subject in all schools.

At the same time, being sensitive to the diversity of the population and the sensitivities of the different ethnic groups, as well as respect for diversity in cultures and different languages spoken, the system allowed for the primary schools to be taught in the vernacular language, and pupils' own language to be taught in secondary schools as an elective subject when there was a request for it.

All English primary schools were converted into National Primary Schools, and all secondary schools into National Secondary Schools with the medium of instruction in the national language. The Tamil and Chinese primary schools were converted into National Type Primary (Chinese or Tamil) schools, using Tamil or Chinese as the medium of instruction, respectively. Pupils from the National Type schools were to be given an additional year at the beginning of their secondary education to allow for the acquisition of language (Bahasa Melayu) proficiency. By 1982, the implementation of the language policy was completed.

The Education Act also provided for a universal free primary and automatic promotion until the third year of secondary school, which meant nine years' of universal schooling for all. This was achieved in 1964, when the Secondary School Entrance Examination was abolished. At the upper secondary level, students were streamed into either the Arts or the Science streams, with a core of common subjects.

To ensure a harmonious and balanced society, Religious (Islamic) and Moral Education were made school subjects, for the Muslims and non-Muslims respectively. To accommodate the needs of human resource development, emphasis was to be given to technical and vocational education; to ensure quality education called for the establishment of the Federal Inspectorate of schools and expansion of teacher education.

In 1974, another committee, again headed by the then Education Minister, the Honourable Dr. Mahathir Mohamad, was set up, this time to review the implementation of the Educational Policy. The report of the committee, which came to be known as the Cabinet Committee Report, released in 1979, contained 173 recommendations, emphasising the need to adjust education not only to gear the system in meeting the socio-economic requirements of the country, but also to ensure the quality of students graduating from high schools. It called for

improvements in the qualitative aspects of the curriculum, teacher education, planning and management, and the provision of support services and the introduction of a number of educational innovations. It basically outlined the framework for a system of education suitable for and enhancing a progressive Malaysian society. This marked the beginning of radical curriculum reforms of the 1980s, which are still in progress. It saw new textbooks being written with passages and texts emphasising the local setting and context seen through Malaysian eyes. It also saw the entire curriculum being reoriented, with a Malaysian-centric approach to instill a sense of pride and achievement in each student.

At this juncture it is pertinent to mention that the basic structure of the Malaysian school system has remained the same over the years. Basically, the Malaysian educational structure is pictured as a 6-3-2-2 system, that is six years of primary education, three years of lower secondary, followed by two years of upper secondary and finally two years of pre-university. At the end of every stage, students sit for a common public examination run by the Ministry of Education. Changes in the last couple of years saw in some instances, the two years of pre-university replaced by matriculation classes in certain tertiary institutions.

The Malaysian school curriculum and reforms

As implied in the previous section, the present Malaysian school curriculum is in the process of being reformed, starting in the 1980s following the recommendations of the Cabinet Committee Report. The curriculum is still tailored to suit the objective of fostering national unity and at the same time to produce trained and skilled manpower for nation building at least at secondary schools. However, special emphasis is given to the development of the whole individual concentrating on values education. It is designed to instill national consciousness and national identity, while at the same time providing basic knowledge and training, as well as holistic development of the individual child. Hence it emphasises, at all levels, a holistic and balanced development of pupils in the cognitive, affective and psychomotor domains, the cultivation and fostering of desired moral and citizenship values, and knowledge and skills needed for the Malaysian nation of the future. This is encapsulated in the national philosophy of education which states:

> Education in Malaysia is an ongoing effort towards further developing the potential of individuals in a holistic and integrated manner, so as to produce individuals who are intellectually, spiritually, emotionally and physically balanced and harmonious based on a firm belief in God. Such an effort is destined to produce Malaysian citizens who are knowledgeable, who possess high moral standards, and who are responsible and capable of achieving a high level of personal well-being as well as being able to contribute to the harmony and betterment of the nation at large.

To achieve this, the curriculum puts equal importance on the syllabus and subject content as well as related teaching-learning activities, and a co-curricular aspect carried out within and outside the classroom, to complement the core.

The reform of the 1980s is marked with the implementation of the New Primary School Curriculum (NPSC) in 1983, followed with that of the Integrated Secondary School Curriculum (ISSC), whose implementation began in 1989. To this effect too, the Education Act of 1961 is being revised.

The Primary school curriculum, as envisaged in the NPSC, heavily emphasised the three Rs, broke away from the heavy subject-content based on the "old" curriculum, and put forth the integration of content among subject disciplines. The focus is on a child-centred instructional approach, with teaching and learning activities designed to mainly encourage active pupil participation for aural and verbal skills, reading for understanding, writing based on experience and knowledge as well as application of basic mathematical concepts such as addition, subtraction, multiplication and division. It emphasises the acquisition of knowledge through direct experience. Specifically it emphasises learning through a variety of experiences, to be managed through a variety of groupings (class, small groups, pairs, or individuals), appropriate to the skills, interests and abilities of pupils. A greater diversity is to be applied to the selection of knowledge and skills to be taught in particular lessons, as well as more attention to individual differences and needs of students. The teaching/learning process is to be enhanced by using local materials and resources.

The NPSC can be divided into two phases, the first covers the grades one to three, and the second, grades four to six. During the first phase, teaching time is 1 350 minutes equally divided into 45 teaching periods, with 70 per cent allocated for the acquisition of the three Rs, 13 per cent for Islamic knowledge or Moral Education for Non-Muslims, and 17 per cent for Music, Physical Education and Art Education, as well as co-curricular activities.

In phase II, the total teaching time is increased to 1 440 minutes, divided into 48 teaching periods, with 52 per cent for acquisition of the basic three Rs, 17 per cent for Man and his Environment, designed to introduce pupils to the rudiments of Science and social sciences, 13 per cent for Islamic Religious Knowledge or Moral Education, and 18 per cent for Music, Art, Physical Education, which also includes other activities such as co-curricular and school assembly. The objective of subject integration is manifested in the subject Man and his Environment, which is an integration of Science, Geography and History, deemed to be able to provide sufficient knowledge at the primary level.

As a continuation of the NPSC, the Integrated Secondary School Curriculum was designed to provide general education, with core subjects compulsory for all and elective subjects to allow student choice. It was pointed out that the old curriculum at the lower secondary level was too academic, and electives offered were imposed upon students by the facilities available in the schools they were enrolled in. The old lower secondary curriculum is found in Appendix III.

The lower secondary education level of the ISSC, offers core subjects which comprise Bahasa Melayu, English, Science, Mathematics, Art education, Geography, History and Islamic Religious Knowledge/Moral Education, and Physical Education. Beginning in 1992, a new subject, Living Skills, was introduced. This comprises elements of the former elective subjects (Industrial Arts, Home Science, Commerce and Agricultural Science), moulded together to provide students with entrepreneurship and family life skills. Additional elective subjects are Tamil and Chinese languages, as well as Arabic. A major portion of time is allocated for Bahas Melayu, English, Science and Mathematics.

The old upper secondary school curriculum, tracks students into the Academic streams of Arts or Science in the regular schools, and the technical or vocational streams offered technical and vocational schools respectively. For the Arts streams, the subjects offered are Bahusa Melayu, English, Mathematics, Science, Art Education, History, Geography and Islamic/Moral Education. Elective subjects include Malay Literature, Chinese Language and Literature, Tamil Language and Literature, Literature in English and other foreign languages. For the Science stream, the core subjects offered are Bahasa Melayu, English, Mathematics, Biology, Chemistry, Physics, Civics and Islamic/Moral Education. The elective subjects are Art Education, Commerce, Malay

Literature, Chinese Language and Literature, Tamil Language and Literature. Students choose a minimum of seven, and a maximum of nine subjects for the School Certificate Examination at the end of Secondary V.

For the students in the technical and vocational schools, core subjects are grouped into general education and technical education or vocational education as the case may be. The core subjects for the general education component are Bahasa Melayu, English, Mathematics, Chemistry, Physics, Geography and Islamic Knowledge/Moral Education. The core technical education subjects consist of Mechanical Engineering, Civil Engineering, Surveying, Agriculture and Commerce. The core vocational education subjects are divided into theory and practical subjects, which consist of Engineering Trade courses, Automobile Mechanics, Building Construction, Electrical Wiring, Refrigeration and Air Conditioning, as well as Welding and Metal fabrication.

With regard to this, the Cabinet Committee Report pointed out that channelling students into streams neither follows sound educational principles, nor is in line with general education at the secondary level. Furthermore, tracking was based on achievement results obtained in the public examination at the end of lower secondary level, the Lower Certificate of Education, which did not consider the question of latent talent, interests and aptitude of students. The ISSC calls for single tracking at the upper secondary level, while giving students the option to pursue their different interests by offering elective subjects. These are divided into three tracks, allowing student choice according to their aptitudes and specialisation for education at the tertiary level, or the world of work they choose to pursue.

Conclusion

Educational development and curriculum reform in Malaysia, as has been discussed, has been closely tied to the economic and social development of the country, while at the same time consciously promoting and fostering national unity. The reforms of the 1980s, triggered by the Cabinet Committee Report of 1979, heralded in the NPSC implemented in 1983, followed by ISSC, implemented in 1979, are still in the process of implementation. Just as the changes in curriculum before then took into consideration social, economic and political changes of the times, the report of the 1980s looked towards the future for direction. The premises of current curricular reform are now closely linked to the explicit educational philosophy, as well as Vision 2020, revealed by the Prime Minister as a target to be achieved in the next thirty years.

The school curriculum is being consolidated to provide general education, with special emphasis on the qualitative aspects to produce quality graduates who are sensitive, caring and thinking human beings as well as sufficiently informed of and interested in changes happening in and out of the country, in line with a progressive Malaysian society, as envisioned in Vision 2020 (Mahathir Mohamad, 1991).

Primary education has been restructured to emphasise the basic three Rs and integration of subject matter content to promote thinking individuals. The lower secondary curriculum saw an extension of the NPSC, consolidating basic education and introducing general education, with an exposure to technical and vocational knowledge useful as life skills. Curriculum at the upper secondary level is in the nature of general education suitable not only for pupils who are entering the world of work after high school, but also for those who are gearing for tertiary education and further specialisation. An important feature of the curriculum is the concern for values and moral development of children and youth. To this end, Islamic Education is made compulsory for those

professing the Muslim faith, and Moral Education for non-Muslims. At the same time, a "values across the curriculum" approach has been adopted wherein all teachers are also teachers of morals, values and discipline.

In the domain of meeting manpower requirements, reforms have been instituted to meet the needs of the nation. In 1965, when the country aimed to bring about greater economic and social development, comprehensive education was instituted at the lower secondary level. During the period of the Second Malaysia Plan (1971-1975), steps were taken to structure the system towards science, mathematics and technology-oriented courses. This period saw the establishment of residential science secondary schools with emphasis on the science subjects, and an increase in the number as well as the importance of technical and vocational schools. Subsequent development plans (Third, Fourth and Fifth Malaysia Plans), continue to emphasise science and technology, which has resulted in the establishment of 68 technical and vocational schools with an estimated enrolment of 30 200 by 1990. The period of the 1990s saw increasing importance being given to the quality of technical and vocational education, in line with the academic streams and an increasing opportunity for students in such streams to pursue tertiary education. The stigma henceforth being given to the vocational stream is being slowly erased.

In conclusion it can be said that educational and curriculum reforms of the country have been prompted by the calls for national unity, meeting the manpower requirements and the concern for the development of the whole person. Whilst grappling with the ever increasing enrolment in schools, there is also the concern that the quality of education should not be sacrificed.

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2.3.5 The Experience of Thailand: Higher Education

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Higher Education Development in Thailand: Policies, Research Priorities and International Co-operation

Thailand, like any other country in the world, has been greatly affected and influenced by the advances in science and technology as well as by telecommunications. It also has great potential to eventually become an agro-industrialised or newly-industrialised country. The role of higher education has consequently been challenged and needs to be properly and consistently adjusted to keep abreast of the recent and future rapid changes.

The year 1987 can be marked as another milestone of Thai higher education development when the Ministry of University Affairs (MUA) introduced the idea of a long-range strategic plan for higher education amid continuing social and economic changes in Thailand. Subsequently, a 15-year plan based on extensive policy research and reviews from a pool of experts was prepared. It should be mentioned here that "Environment Scanning" was also incorporated as part of the formulation of this plan.

Policy on Higher Education Development

The 15-year Long-range Plan for Higher Education covers the periods of 1990-2004. Aggressive and dynamic in nature, it has served as a solid base of policy formulation and direction. Our current Seventh National Higher Education Development Plan, spanning 1992-1996 emphasises the four crucial dimensions, i.e. equality of opportunity, academic excellence, efficiency and internationalisation of higher education, all of which are described below.

Equality of opportunity. There are currently 21 public universities/institutes, two of which are open universities. Some of these higher learning institutes are located in each geographic region across the nation with such special programmes as a quota system for local youth to have access to higher education. Distance education media so as to allow increased access of people in different parts of the country are well developed. The private sector is encouraged to have an active share in educational provision. (At present, there are 26 private universities/colleges nationwide). Opportunity for the less advantaged is also broadened by new supportive measures such as scholarship schemes and revolving funds for student loans.

Academic excellence. Close co-operation between higher education institutions and the private sector including industry is seen as crucial in accelerating the academic development of universities/colleges. Various projects have been launched in the form of student and staff exchange, institutional linkages as well as joint research projects and training programmes at both national and international levels. University staff are continuously encouraged to upgrade their research work and publications to meet international standards. Manpower in some special fields, e.g. science and technology, is also stressed.

Efficiency. High importance is attached to educational efficiency geared toward the amendment of rigid rules and regulations under the bureaucratic system in relation to resource allocation and overall general administration and management which will enhance flexibility and autonomy. At the same time, academic and physical environment are also emphasised to ensure that academics and educational personnel will be able to develop their potentialities to the fullest.

Internationalisation of higher education. The notion of an interdependent world network among countries, with Thailand being an active member, emerged very strongly alongside the pace of economic development. The need for Thai higher education to play a crucial role is called for with the ultimate purpose of increasing the global awareness and the international outlook of Thai higher education institutions. Among the noteworthy measures are, for example, the improvement of academic programmes so as to enrich language proficiency and international perspectives of graduates, increasing exchange of information and a greater sharing of expertise.

Research

The technological demands of the country call for higher education institutions to strengthen their research and development capabilities as a means to keep abreast of the rapid industrialisation in various production sectors. The Long-range Plan for Higher Education has recommended that the government encourage higher education institutions to play a significant role in research and development activities and that increased budget be consistently allocated. Budget for research should not be less than one per cent of GNP in 1997 and not less than 1.5 per cent in 2004.

Accordingly, in the Seventh National Higher Education Development Plan, the qualitative aspect of research and development is emphasised and the expected outcomes are as follows.

① Research undertaken by higher education institutions will be highly flexible and responsive to the technological needs of the country in an effective manner. Research funds will be obtained from the revenue of each institution and from the government in the form of endowment funds and general subsidies. Rules and regulations on financial, supply, and personnel administration will be amended to facilitate research work.

② There will be different forms of research bodies, e.g. ad hoc research bodies, research institutes specialised in some specific areas, all of which will enhance academic excellence, reflect its significance at the national level and create continuity in implementation. Science parks will be established with professional groups among universities/institutes being created to strengthen research activities through academic exchanges leading to the firm direction of research and launching of increased joint research projects.

③ Co-operative projects between universities/institutes and the private sector will be on the rise. Such co-operation may include soliciting funds for research from the private sector and joint investment in technological enterprises, e.g. consultancy companies, laboratories for testing, validating and analysing research findings.

④ Basic research of higher education institutions will emphasise social and human sciences, especially research that helps determine patterns of research development, thus promoting

understanding of local wisdom. The impact of basic research development in the fields of biological science, physical science and agricultural science will also be stressed. Applied research will focus on technological development in the food industry, agricultural product processing, engineering, petrochemical, and information technology industries, and resource utilisation technology.

⑤ Research activities of higher education institutions will be disseminated to the international community through international symposia held in Thailand, presentation of research findings of Thai researchers in meetings or international journals, joint research projects undertaken in Thailand by foreign researchers or vice versa, and increase in research funds from external sources.

⑥ Activities to disseminate information on intellectual property among academics and university researchers will be launched.

⑦ Information systems for research at both national and international levels will be developed.

International Co-operation

To make the policies stated in the Seventh National Higher Education Development Plan a reality, international co-operation is seen as an integral part of the overall development and implementation.

The Ministry of University Affairs is now embarking on the development of an international co-operation database for higher education. It also expects to be able to serve as a national information clearinghouse on higher education co-operation. The strengthening of institutions' capabilities and readiness is to be among the main concerns in order to launch academic functions and activities of an international nature.

International co-operation is also supported through the special ministerial committee established serving as a forum for public and private higher education institutions to share ideas, exchange expertise and experiences, and work together on international activities. Institutional links, exchange programmes, joint programmes of study with foreign institutions, are also encouraged. At present, a good number of international programmes in various fields of specialisation are offered by both public and private institutes of higher learning, strengthening even closer relationships with the international community.

Conclusion

Thai higher education with its continued strengths and support has considerable achievements to its credit. Its innovative launching of the 15-year Long-range Plan for Higher Education has illuminated a solid path to the future. Though it is premature to perceive any tangible or measurable results, commitment and active participation of all higher education institutions, with the support of the Ministry of University Affairs and agencies concerned, will ignite further development and continue to flourish.

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2.3.6 The Experience of Singapore: Higher Education

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Introduction

Several issues on higher education have been highlighted for discussion in this Conference. It is likely that there will be many approaches to consider. This paper responds to some of the questions raised in the issues.

Quality and Institutional Improvement

What is the current perception of quality in higher education?

The current perception of quality in higher education is that it varies from course to course and lecturer to lecturer. The important paradigm that each teacher should have is the fact that there is always a place for improving what has been taught. What every lecturer should guard against is failure to keep the course materials and approach up to date. It would be a good operating principle to go through the teaching materials yearly, prune and add new references and delete older ones where a newer (and better) reference is available.

What efforts are being taken to evaluate quality in teaching and research?

Teaching. Efforts taken to evaluate quality in teaching can be self-directed, departmental or both. In my department, students are asked to evaluate the course content as to whether they found the content too much, just right or too little as well as the perceived relevance. Free comments are also invited on the strengths and weaknesses of the course and suggestions for improvement. This type of feedback has been constructive and useful.

Where there are adverse comments, such as being late, being unprepared or being unclear, the comments are shown to the tutors concerned for them to take note. The spirit of continuous improvement has prevented teachers from being unduly defensive or feeling threatened. Often, senior staff are consulted on teaching and presentation techniques. The student feedback questionnaire and peer support, therefore, seem to be a practical way of evaluating quality of teaching for purposes of course improvement.

Another way of self-directed improvement that has been encouraged in the National University of Singapore is the use of video camera for taping one's lectures. Only the lecturer himself gets to see the tape and if he wishes, he may discuss it with a senior colleague. This method has been useful in self-correction of unconscious distracting gestures or behaviours.

Research. Evaluation of research should be directed at the extent the research effort has answered an unanswered question or has made a contribution to knowledge by in-depth reviews of current knowledge and controversies. On the personal plane, to evaluate a staff member on his research efforts, the yardstick should not be the total number of papers written but how much have his research efforts contributed to acquisition of new knowledge or clarification of confusion. Such measures are being used in some universities, but the quality factor has not yet been universally

applied. Of course, there is also a need to judge differently for a new researcher as opposed to a trained one (Moses, 1987).

What measures have been adopted to ensure, and promote improvements in quality in these areas? What specific strategies have been followed to maintain and improve quality of teaching and research staff?

The teaching methodology courses are a practical way of improving quality of teachers in higher education. These are organised in all the higher education bodies in Singapore. It is easier to engage the enthusiasm of new teachers in such courses than senior teachers who may suffer from the *déjà vu* mentality. One way out is to involve the participation of senior teachers in the teaching courses as has been done in the National University of Singapore Teaching Methodology courses. These have been described by Chen (1987). Teaching improvement efforts did not profit the younger faculty members only, as the following quotation from Chen's paper shows:

> The clinical professor said he himself benefited from the comments of young faculty members who sat in his lectures. "One of them commented on my bad slides and showed me a better way of taking photographs. The teaching methodology courses also enabled me to discuss with my younger colleagues the importance of imparting to the students not just skills but a certain quality and style of thinking -- to be analytical, logical and very thorough -- to show originality in diagnosis and problem solving." The clinical professor believed that besides the basic level of teaching skills, "one must show care and concern, enthusiasm, some degree of infectiousness in one's teaching."

In a similar vein to teaching methodology courses there is an important need for practical research methodology courses. There is a need to ensure that every researcher knows the first fundamental paradigm of research, which is, don't start until you have an answerable research question; the second fundamental paradigm is the need for a proper design of the research. Then follows the techniques of data collection and analysis. With the arrival of computers, there is a need to know how much computers can help. Useful software to know are Epistat, dBase, and SAS or SPSS. *Until every researcher is equipped this way*, there is bound to be a tremendous wastage of resources including the researcher's time, and high stress, anxiety and frustration will surely follow.

Relevance of University Teaching and R&D to Social and Economic Needs

What are the means through which economic and social needs are conveyed to higher education? What are the means whereby higher education responds to these needs? What are the forms and extent of co-operation between higher education and industry?

There is a need for institutions of higher learning and industry and the community to engage in a two-way exchange. This can be effectively done through seminars, workshops and conferences. In this way, academics can keep in touch with the real world. Similarly, the industry and community can benefit from the new advances in knowledge and technology. Short courses will provide opportunities to hone skills. Consultancies are an effective way of tapping the available resources in higher education and at the same time providing opportunities for academics to know the real world and real problems.

What steps are being taken to achieve a balance between the more traditional roles of higher education, in scholarship and general liberal education, and these economic and social demands?

For developing countries, there is a need to consciously balance the acquisition of high technology skills and a general liberal education. Both are important, but it is likely that the liberal arts will take a lower profile. It should not be forgotten however, that even high technology can benefit from a sense of aesthetics.

Financing and Management of Higher Education

What is the current pattern of financing of higher education? What appear to be the most successful patterns of resource distribution and management in higher education (system and institution)?

There is no doubt that higher education is costly to finance and institutions of higher learning expensive to maintain. However, the wisdom of appropriate technology should not be forgotten. The reputation of an institution owes more to the calibre and dedication of its people than just hardware and firepower. Innovative management is important in maximising available resources, but may be easier said than done.

Institutions of higher learning are financed from a mix of resources: the government, community agencies, the industry and individuals who pay their way in the courses. Endowment funds from the community may be an important source of finance.

For individuals, the provision of scholarships, fellowships and inter-government support may help needy students who may otherwise be unable to afford higher education.

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2.3.7 The Experience of Taiwan: Higher Education

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Because of the scarcity of its natural resources, Taiwan has put special emphasis on elevating the quality of human resources in national development.

As a result, higher education has developed rapidly in the past twenty years. In 1970, the number of students enrolled in colleges and universities was 95,145, representing approximately 0.6 per cent of the total population. This year, the number reached 261,464, or approximately 1.3 per cent of the total population. It is expected to reach 1.8 per cent in the year 2000 in order to meet the human resource requirements for national development.

Higher education has faced new challenges in recent years and many adjustments have been made. The current foci of our higher education policy are: a co-ordinated plan to invest each college and university with a distinct character; to identify and strengthen the priorities of the graduate schools; and to upgrade academic research. Based on the principles of "equal emphasis on quality and quantity", and a balance of interests between the humanities, science, and technology, a steady annual growth in the higher education population is to be achieved in order to build up high-level manpower resources needed for national development. In the meantime, we will also emphasise the active promotion of international educational and cultural co-operation projects.

Comprehensive Plan for the Quantitative Development of Higher Education

For the planning of long-term development of higher education in Taiwan, the island will be divided into four separate geographic areas for creating a national higher education network: north, central, south, and east. The ratio of higher education graduates to the general population in major developed countries will serve as a criterion as we plan for the gradual expansion of some of the universities and the establishment of new ones to increase the number of students enrolled in higher learning institutions. Today, the students enrolled in public and private colleges and universities account for 1.3 per cent of the total population in Taiwan. This will be increased to 1.8 per cent in the year 2000.

In the last three years, seven new colleges and universities have been established. In accordance with the Six-Year National Development Plan, several more colleges and universities will be established in locations throughout the island. For example, plans have been made for a national university in Hualien on the East Coast, an art institute in Tainan in the south, a technology institute in the southern city of Kaohsiung, and the establishment of National Chi-nan University. Some three-year junior colleges will be converted to four-year institutes for admitting more students to meet the increasing demand for highly educated human resources. In recent years, there has been a remarkable rise in the passing rate of those who took the college and university entrance exam. As the number of college and university students continues to grow, the quality of human resources will improve. The increased opportunities in higher education will also lead to less pressure on the secondary-level students, in turn leading to a sounder development of the elementary and secondary schools.

Enhancement of Teaching and Academic Standards in the Universities

To cultivate high-level academic expertise, enhance academic research, and pursue balanced growth in scientific, technical, and humanities education, special development targets have been set for graduate school education. Emphasis will also be placed on planning and promoting a medium-term development project for nationwide public and private institutions, so as to establish specific objectives and characteristics for each institution. A nationwide academic computer information service and a university computer network will be promoted to establish an effective academic service support system. The direction of evening schools is also being re-considered for possible improvement. It is expected that the allocation of educational budget and personnel of the public school system will gradually extend to cover the public evening schools. This will lead to improvement in the teaching quality of the university as a whole.

With respect to enhancing the quality of university faculty, the government has consistently selected outstanding faculty members to do advanced research at home and abroad, and has invited scholars to return and teach in institutions here. This has led to a remarkable upgrading of the faculty. More measures to cultivate and strengthen teaching and research by professors are continually being introduced.

To cope with the gradual expansion of higher education, and to maintain a high academic standard of quality at the universities, the conducting of the "university education evaluation project" will continue. A new measure will also be instituted to screen out the academically incompetent students in order to assure the academic excellence of higher learning institutions.

To provide fair education opportunities to the children of medium and low-income families, a new university tuition policy is being proposed. The student tuition loan project will be expanded. A system for part-time working students will be established and the award and scholarship policies will be improved to help students support themselves and develop healthy and independent personalities. With respect to the future tuition policy, some new principles and projects are proposed for private institutions with the goal of achieving comprehensive advancement in the teaching standards of public and private institutions. We have already finished the proposals on "The Guidelines for the Ministry of Education's Budget Allocation to Private Institutions" and the "Four-Year Medium-Term Private Institutions Financial Subsidies Plan." This will establish an operating fund for assisting private institutions. Each year the fund will be increased until, in the fourth year, it will reach 20 per cent of the total budget for each institution. Measures will be taken to help private institutions expand financial resources and streamline their financial management systems under the guidance of a new private school law. This will also strengthen the function of the school board and school administration. Our ultimate goal is to foster a more flexible tuition policy in accordance with future social development trends. The adjustment of the tuition rate for the public institutions will be kept in proportion to the tuition rate for the private institutions. To facilitate institutional development, the possibility of permitting each school to incorporate the revenue from students' tuition payments into its annual budget will be considered.

A More Flexible University System

In the past, the educational system was marked by a lack of flexibility, as the educational policy for higher education stressed quality over diversity. To meet the new challenges of a pluralistic society in the academic realm, the university education system must be changed. A positive step is seen in the revision of the university law and relevant regulations, providing greater

autonomy for the administration and the planning of each university. In addition, university extension programmes are being emphasised much more in order to increase the scope and strengthen the function of university education. The college entrance examination, which has been in existence for more than thirty years, will be greatly modified after the college entrance examination centre is jointly established by the universities and colleges. It will have a permanent staff working under the guidance of experts and educational test researchers. A detailed and feasible plan to completely revamp the joint college entrance examination is expected to be proposed within five and one-half years. In the meantime, the methods of formulating the questions in the joint college entrance examination tests are being evaluated, so that the validity of the test items will improve and be more conducive to normal teaching and the lessening of the course load for students at the elementary and secondary school levels.

Strengthening International Academic Co-operation

Other measures have also been implemented to encourage international scholarly co-operation in the universities. Up to now, a total of 242 long-term academic exchange agreements have been signed with foreign colleges and universities. Academic exchange agreements that were favourably evaluated have received financial support from the Ministry of Education. The Ministry also provides funding support to universities and colleges or academic organisations for participating in or sponsoring international scholarly conferences. It also invites distinguished academics and experts to visit or give lectures. Financial support is also offered to enable university faculty to pursue specialised research and to help with the publication of academic journals and research work. Besides seriously promoting international scholarly exchange and research, the Ministry is also playing an active role in helping both Chinese students who go abroad to study, and foreign students coming to Taiwan, and to promote Sinology and the teaching of the Chinese language both in Taiwan and abroad. Through such non-profit academic foundations as the Chiang Ching-Kuo Foundation, the Ministry will support international scholarly exchange.

Conclusion

The goals of the Taiwan Government's policy on higher education can be summarised as follows:

① to prepare a large pool of highly-skilled personnel vested with the expertise needed to enhance national development;
② to expand the intellectual horizons of citizens by providing more opportunities for their higher education; and
③ to promote a better understanding among nations through international scholarly exchange.

The policy shall be reviewed and revised as necessary to accommodate domestic needs and international trends.

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3.1 Primary and Secondary Education for Development: Key Decision Areas

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Introduction

The word "development" conveys an image of desirable growth from a simplified state to one which is more complex, more encompassing and more beneficial. In education, the term is applied to individuals when we describe their physical, cognitive, social and moral development; but also to the society when we adopt educational policies and strategies to promote economic, cultural, social and political development of a nation. Whether we think of the development of individuals or, as in this paper, the development of a nation, the most desirable policies to foster development are a matter of debate. The debate is fuelled by different ideological conceptions of the preferred outcomes, uncertainty about the long-term impact of selected strategies for development and tension resulting when some strategies produce key desirable outcomes but at the price of giving rise to other undesirable outcomes.

Typically, the literature on education for development selects a key area for policy and planning and provides an analysis of policy options within that area and their most likely consequences. In contrast, the purpose of this paper is to provide a broad perspective on system-level decisions related to primary and secondary schooling which a nation needs to address in its quest for dynamic development. Ten key educational policy areas are identified and discussed briefly. This paper does not attempt to analyse the various policy options because this should be a fruitful endeavour for the workshop sessions. Rather the ten areas are identified as a potential framework for workshop interactions and raises questions underlying policy decisions. The strategies adopted within any country for any one of these decision areas will depend on many unique factors within the country, including a significant number with political origins since education is now overtly on the political agenda. However, of importance to this Conference is the value in sharing experience across nations. Are there some options which can be shown to accelerate development? Are there others which have impeded progress? Discussion of the policy options taken in different countries, the reasons for the choice, the consequences of the decisions and explanations of the outcomes should provide a basis for a most fruitful exchange of ideas. Participants may find it valuable to select some of the ten areas for in-depth analysis and comparison rather than try to cover all superficially.

Key Decision Areas

The structure of the schooling system

Subsumed within this broad heading are a number of thorny issues for educational managers.

A fundamental question for governments is one of the educational provision and the introduction of reforms to raise the overall level of national development by improving the life opportunities for young people (Mellor, 1989). While developing countries strive to provide universal primary education, developed countries debate compulsory leaving age within the secondary cycle and the nature of educational provision beyond that age. Where vocational training is provided at a level below higher education, what form should this take? How should the vocational sector relate to schooling and to workplace training? What flexibility exists for students to move between formal education and training? Are certificates or awards sufficiently flexible to allow "articulation" across sectors? What is the format for non-formal and continuing education and who provides it? What is the relationship between non-formal education and schooling? Can some of the same resources (buildings, teachers, materials) be used?

A second set of questions concerns the role of the private sector. In a number of developed countries, the provision of education by the private sector needs to be seen in historical context and private schooling may even have preceded government education. Frequently, private sector provision is subsidised by government in recognition of the value of this additional investment in education. In a developing economy, governments frequently need to make deliberate policy decisions on whether or not to encourage private schooling and if so, the role, size and degree of control to be exercised. This is one area where conflicting outcomes are most likely and vigorous debate is guaranteed.

A third set of questions hinges on the degree of centralisation of the schooling system. In a number of less developed countries, a degree of decentralisation has existed for several pragmatic reasons. Faced with scarce resources for education, poor communication with distant education ministries and inadequate infrastructure, local communities have been obliged to share in providing buildings, limited facilities and even staffing. In such countries, educational reforms have often introduced greater centralisation in an effort to improve efficiency, establish better management information systems, and generally provide greater access and equity (cf. Foster, 1989). However, it is interesting that this has occurred at the same time that many developed countries have made determined efforts to decentralise the management of education by reducing central bureaucracies and giving more responsibilities to schools and their communities to manage their resources locally. Schools and their principals have generally embraced the concept of the self-managing school and welcomed the autonomy and the responsibility in this area. On the other hand, although resource management has been decentralised, there has been a parallel tendency to tighten up on curriculum specifications and on the school's accountability for its outcomes, including student achievement.

In the participants' countries, what similarities and differences exist in the organisation of schooling? What are the perceived strengths and weaknesses?

The role of teachers

In spite of research that indicates the importance of the home in supporting student learning, probably no other factor in educational provision is as important as the quality of the teachers. Current policy debates in Australia (Schools Council, National Board of Employment, Education and Training, 1990) focus on teacher recruitment, the nature of preservice education and the relationship between theory and practice, definitions of teacher competence, local selection, performance appraisal and professional development. Current policy trends in some countries including Australia favour

- more recruitment of people with experience in other fields;

- a greater emphasis on extended practicum experience;
- teacher competence assessed as growth in professional skills rather than mastery of isolated behaviours;
- more accountability;
- selection and appraisal at a local level;
- professional growth defined as a continuum extending from initial training, through induction, to continuing professional development.

To what extent are these trends evident in other OECD countries and in the DAEs? What are the perceived advantages and disadvantages of following these trends?

Improving the quality of teaching and learning

Long-term economic and social development needs a foundation of high quality basic education. Effective learning requires that students are active learners engaged in solving a meaningful problems. Yet too often, in developing and developed countries alike, students are passive rote learners or are asked to solve abstract problems bearing little relationship to their experience or the local environment. Admittedly, curriculum reform in recent years has sought to change this situation but changes are also needed in teacher behaviour. To encourage fundamental change in the approach to teaching and learning, a country needs to commit resources to the professional development of teachers and to provide them with effective models of learning. For example, evaluations of the Colombian Escuela Nueva (EN) program (Schiefelbein, 1991), developed over 15 years and using a low-cost "unassembled educational kit", stamp it as an innovation capable of being replicated in other developing countries wanting to break the cycle of poor quality basic education.

Where a new approach to teaching and learning is introduced from another country, it needs to be debated within broader parameters in the society. For example, when the Institute for the Promotion of Teaching Science and Technology (IPST) in Thailand developed new science and mathematics curricula in the 1970s (Sapianchai, 1984), policy makers had to come to terms with the potential conflict between an "inquiry" approach which was favoured for the science programs and traditional Thai values which placed greatest respect on the transmission of existing, cultural values.

Also important to economic and social development is the relationship between theory and practice. A number of Western countries have traditionally given most recognition to academic programmes and the ability to think symbolically. Only students who experienced difficulties with academic programmes were streamed into curricula with practical and vocational experiences. Recent debate has focused on the importance of practical applications, real world problem solving and work-related competencies for all students (Australian Education Council Review Committee, 1991). Fundamental change to classroom practice will be needed to implement the changed directions.

In a nutshell, how can current approaches to teaching and learning be described in participating countries? Are there examples of innovative and highly effective practice? How have countries confronted and resolved conflict with cultural values? Where dilemmas arise, what

strategies are used to resolve them? What strategies have been used to integrate theory and practice?

The nature of the curriculum

There are several fundamental questions about the nature of primary and secondary curricula. What subjects or key learning areas will be included and how will they be organised? For example, my state of New South Wales (Australia) uses just six Key Learning Areas for primary schools: English, Mathematics, Science and Technology, Human Society and its Environment, Creative and Practical Arts, and Personal Development, Health and Physical Education. In contrast, in the Lao People's Democratic Republic, for example, fourteen subjects have been time-tabled in primary schools.

Within any subject, how much will the content, processes and desired outcomes be determined by a prescriptive, external syllabus and how much will depend on decisions made by the school, its teachers and students? In recent decades, many countries have moved from a prescribed syllabus towards an emphasis on school-based curriculum development before arriving at a more "balanced" perspective. At least two versions of a balanced curriculum are in evidence. In the first place, some countries have opted for a core curriculum taken by all students complemented by a series of optional studies in which local priorities and individual student needs affect what is selected. A second balanced approach is the use of a curriculum framework. In the curriculum framework model, broad parameters are set for curriculum outcomes but schools have considerable autonomy in deciding specific content or using local applications. Within a country, the approach used can also vary depending on the level of schooling.

One specific issue for curriculum planners is how to deal with demands for the inclusion of content related to current issues, concerns and developments within the society. For example, if a country has a fairly traditional set of subjects, where do topics such as the environment, use of computers, personal safety (including road safety), drug education, AIDS and other sexually transmitted diseases, multi-cultural studies, work education and links with industry fit within the curriculum? Where additional subjects or topics are "bolted on" to the existing curriculum, the demand on students and teachers becomes unreasonable. On the other hand, if treated "across the curriculum", they may be given scant attention.

At the secondary level, or more particularly at the interface of schooling with the world of work, the debate on the relative merits of general vs. vocational education has been repeated decade after decade in country after country. A related issue concerns whether there should be streaming or selection into different curriculum strands at the secondary level or whether all students should be offered a wide range of subject choice within a comprehensive curriculum model. The most recent trends show a much greater concern with a work orientation in school curricula, but principally in terms of work-related skills, competencies and attitudes rather than vocational training *per se*.

How are these curriculum issues being addressed in OECD countries? In the Dynamic Asian Economies (DAEs)?

Language policy

It is very difficult to write about language policy because of the unique situation in any country yet it is one of the most vital and often controversial areas for policy decisions in education. Consider just a few scenarios.

A country might have a multi-lingual base but needs to make a decision about the language of instruction. Often there are plausible reasons for the selection of one language but there are also important consequential decisions for teaching and learning. For example, in the Philippines, Pilipino (based on Tagalog) is the national language and is used as the language of instruction at least at some stages of schooling. Yet Tagalog is predominantly the language of people living in the Manila region of Luzon. People in distant regions of Luzon, or in the other island groups of the Visayas and Mindanao do not readily understand Tagalog. What then is the impact on children's understanding? Another example comes from Mauritius in the Indian Ocean. English is the official language and is hence used for schooling, including the language for testing in the very important Primary Certificate of Education. Yet the newspapers and radio are in French and Creole is widely spoken by people who trace their ancestry to Africa. In addition, because of heavy settlement from the Indian sub-continent, Asian languages (largely Hindi and a spoken, pigeon form called Bhojpuri) are also widely used. My observations of distributions of student achievement in Mauritian primary schooling invariably revealed a bimodal distribution. A reasonable hypothesis is that some children do not comprehend their work in class predominantly because of language difficulties, although other determinants of performance have been identified (Manrakhan, Vasishtha and Vadamootoo, 1991).

In some countries, the unavailability of books and related reference material in a local language, particularly at secondary and higher education levels, also causes problems. If the country has a colonial history and the colonising power left a legacy of books and speakers using a foreign language, the country faces a dilemma in moving instruction to the local language. This problem is even further exacerbated if the foreign language is not one widely used for inter-country communication in the region.

A multicultural country like Australia faces other problems in deciding which languages to offer in schools in addition to the language of instruction (English). Historically, because of our colonial ties, French and German were taught in our schools as second languages. Following migration from many parts of the world following World War II and a tendency for migrants to settle initially in suburban clusters, there was demand for a whole range of "community" languages (notably from Southern Europe). Some of these were formally incorporated as options into school curricula while others were on offer through Saturday classes or by correspondence. Most recently, following extensive migration from Asia and also closer trade links with the Dynamic Asian Economies, a number of Asian languages have been introduced into schools. By the late 1980s, well over 30 languages other than English covering the three areas of "languages of historic importance", "community languages" and "languages of economic importance", were offered through schools. While there is a strong commitment by all systems to offer other languages and some systems are moving towards obligatory study in a second language at the lower secondary level, policy-makers face a very difficult task in ensuring continuity of study and an adequate supply of teachers in any particular language. Some state systems (e.g., Queensland) have opted for a small number of priority language but decisions of this kind are politically sensitive.

Quality assurance

Strategies to maintain quality control of the outcomes of schooling are still evolving. Some form of examination has been used in many countries to screen students for a higher level of education or to provide certification for completion of a level of schooling (Kellaghan and Greaney, 1992). Where the one examination is used for both functions, there are inevitable tensions. The former is unashamedly norm referenced since the number of places at the next level is usually

restricted; the latter is clearly criterion referenced since the certificate should be defined in terms of achievement of curriculum objectives and competence in defined outcomes.

No amount of quality control can compensate for lack of quality in the schooling process. Hence in a number of developing countries which have achieved universal access to primary education, the screening examination can result in high drop-out and high repetition rates. In some countries, the screening comes as early as Grade 1. High repetition rates at this level result in large classes, a waste of resources and a further deterioration in quality. Inevitably, those students most likely to repeat are in classes taught by untrained teachers in disadvantaged areas and it is difficult to break the cycle. Repeaters become drop-outs. In countries where the first major examination occurs at the end of primary schooling, the problems are similar although delayed. High repetition rates are wasteful and since repetition does not strike at the cause of poor performance, it is usually followed by further failure and drop-out.

What is needed is a better way to identify students who do not learn to read early in their schooling and to redress this problem through intervention. Assessment needs to be seen as a way of charting progress and growth in knowledge and understanding , not as a way to identify what students do not know and fail to understand. Although these two approaches to assessment may appear as opposite sides of the one coin, they are conceptually very different.

Although student achievement is the ultimate outcome on which to judge performance of the system, there is a need to monitor a range of other inputs and processes which affect the quality of the outcomes. Some countries have had a long history of school supervision and inspection as a means of implementing quality assurance. More recently, systems have been moving towards other forms of accountability within a quality assurance framework. Some countries have set up special units for quality assurance.

How have participating countries addressed the dual aspect of selection for the next level of education and certification of achievement at the present level? What other aspects of the education system have been monitored for quality assurance? What specific strategies have been used and how successful have they been?

Financing

The financing of public education has become a difficult and complex issue. Research in the 1960s and 1970s was able to document the considerable cost benefits of private and public investment in education, even if the type of education was dysfunctional with subsequent placement in the work-force. But with high rates of youth unemployment even amongst well educated young people and with much greater demands for upper secondary education, investment in education needs to be well focused. In competition with other high-spending sectors of government such as health, security, transport and communications, education budgets are scrutinised for their effectiveness in a climate of economic rationalism.

Nevertheless, countries do vary considerably in their expenditure on education as a proportion of GDP so that comparative analyses are still worthwhile (e.g., Asian Development Bank, 1985). Within a country, regional systems frequently show disparities in the unit cost per pupil so it is reasonable to seek explanations for this. Variables which need to be considered include teachers' salaries, the extent of support services for schools, demographic factors, school and class sizes (student/teacher ratios), and the size and distribution of the bureaucracy. Similarly, within their education budgets, countries vary in how they allocate expenditure.

Are the DAEs able to point to changes in expenditure patterns and budget commitments for education concomitant with economic development? Are there threshold levels below which budget commitments prevent improvements in quality? What principles govern the division of the education budget within countries?

Textbooks and materials

In an attempt to move away from rote learning and to stress inquiry, problem solving and critical thinking, some countries (including most Australian states) have moved away from prescribed textbooks. In their place, teachers encourage students to use a wide range of reference materials and other resources. Yet research evidence (e.g., Heyneman, Jamison and Montenegro, 1984) suggests that no variable is more often associated with academic achievement than having a textbook and that increasing the quality of textbooks will increase the quality of education.

The role and format of quality textbooks warrants further investigation and schools in fast growing economies should be wary of abandoning textbooks just because additional library and reference material, including some in electronic form, becomes available. Textbooks and related instructional materials can be developed in such a way that students are encouraged to be active, inquiring and self-paced learners.

What policies are currently being followed on the provision of textbooks? What costs are involved and how are they met? What are the characteristics of a quality textbook? What resource materials are needed to supplement textbooks?

Technology

A very significant element in classrooms in dynamic economies is the increasing feasibility of providing new technology, and notably personal computers, to classrooms because of falling costs, greater efficiency and expanded capacity of hardware, and improved software. Although there is mixed evidence on the effectiveness of highly structured forms of computer assisted instruction (CAI), what educator would question the enormous value of using the computer as a problem solving tool in present day classrooms? Any country prepared to make an investment in classroom computers (including professional development for teachers) can expect to make a quantum leap forward in enhancing the quality of teaching and learning.

What policies have different countries used to introduce computers to classrooms? What level of provision (e.g., one computer per x students) gives optimum cost efficiency? What strategies are needed to ensure educational effectiveness?

Social justice

At a time when there is increased awareness of the disadvantage suffered by sub-groups within a society and a commitment to redress the effects of long-standing discrimination, a society looks to its education system as a means of promoting social justice. Some nations have made greater progress than others in defining disadvantage, identifying strategies to enhance social justice and implementing programmes for this purpose. Target groups for such programs include women and girls, students from poor families, minority ethnic groups, indigenous people in countries which have been occupied by a colonising power, students with disabilities, and students who live in remote regions.

In addition to programs which target disadvantaged groups and use intervention strategies to provide positive discrimination, other strategies have been developed to minimise discrimination and promote social justice in mainstream schooling. Examples include the production of textbooks without gender stereotypes, encouragement for girls to enter courses in science and technology, support to enable students with disabilities to be integrated into regular classrooms, the use of new technology to deliver education to students in remote areas, and the inclusion of social justice concepts and applications in curricula.

How have participating countries addressed social justice concerns within their education systems? Have some strategies proved more successful than others? What reporting mechanisms have been used to monitor social justice programs? What legislative procedures have been employed?

Factors Accelerating Development Through Education

In emphasising education for development, are there some factors which act to accelerate the process and others which impede it? This question cannot readily be answered by controlled experimentation within a country so cross-national comparisons are of particular interest. Since such comparisons across countries need to take account of historical, social, cultural and ideological differences, interpretations require sensitive understanding and careful judgements. For these reasons, dialogue among educators from different countries, such as that made possible in the present workshop, is the best basis for the critical appraisal of past directions and insightful planning for future paths.

Dialogue at an international level can result in a high degree of consensus as is evident in the reports of numerous conferences and workshops sponsored by international agencies. When the participants include those responsible for decision-making (such as Ministers of Education), the emergent resolutions can translate into policy directions. A recent example is the World Conference on Education for All held at Jomtien, Thailand (UNESCO Principal Regional Office for Asia and the Pacific, 1989) which appears from my observations to have been highly influential in the region in establishing educational quality in basic education as a high priority. I would also argue that where the dialogue is supported by research studies and systematic cross-national analyses, the conclusions should have enhanced validity and provide a sound basis for successful implementation.

In selecting the ten policy areas listed above, I have endeavoured to focus on ones where international dialogue should facilitate policy development. I have omitted a number of other areas -- for example, school infrastructure, the role of principals, the role of parents, school governance, and school/community relationships - where factors in the local environment will be particularly pertinent.

Finally, I wish to comment on ways that international co-operation can extend beyond an exchange of ideas and translate into co-operative action programs. We are all familiar with programmes and projects implemented under the auspices of the international banks, UNESCO and the other agencies (e.g., Jones, 1988) and the degree of international exchange which occurs therein. In my view, the most fruitful exchanges occur through the formation of partnerships across nations -- whether at the educational system level, or the institutional level, or at the level of professional associations. In genuine partnerships, all participants contribute and all benefit. This is in sharp contrast to exogenous forms of assistance in donor-recipient relationships, whether motivated by colonial links, humanitarian ideals or market forces.

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3.2 Education, Human Resources and Development in Korea: Achievement and Challenges

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Introduction

Korea is a resource-poor country devastated by the Korean War in the 1950s. The per capita GNP was merely $80 in 1962. The industrial structure of Korea was largely of an underdeveloped country, centred mainly around agriculture and light industries.

The economic development that Korea has accomplished since the early sixties has often been cited as remarkable -- the rebuilding of a nation exhausted by years of foreign domination and the Korean War (1950-53).

In many respects, the foreign domination and the war's destruction had left Korea in economic ruins and its people in virtual poverty. The effort to reconstruct the economy in the fifties was supported by large foreign aid. Entering into the sixties, the government pushed an economic development strategy with the launching of a series of five-year economic development plans.

The economy began to take off in the 1960s, with an annual growth rate of about 8 per cent compared to about 5 per cent in the latter part of the 1950s. With the remarkable success of export-oriented industrialisation strategy, the rate of economic growth accelerated, surpassing 10 per cent during the late sixties. In the seventies, the push was focused on the development of heavy and chemical industries, in place of the earlier emphasis on light industries. The rate of growth continued to sustain itself during the eighties.

The dramatic pace of Korean economic growth is attributed to a variety of factors. These include an effective utilisation of an abundant supply of highly disciplined labour, an aggressive and effective development strategy, and favourable conditions in the world trade market.

Yet, the human factor has been especially critical in Korean development.

Lacking in physical and natural resources, Korea used its abundant human resources as the fundamental force behind its economic growth. Korea's export boom was supported by a well-disciplined and low-cost labour force. The Korean workers' willingness to work hard and long hours at extremely low wages, together with their enterprising spirit, served initially as a substitute for technology and skills.

Furthermore, the high zeal for education, traditionally revered in the Confucianistic society, was also instrumental in providing a huge pool of semi-skilled workers for labour-intensive light industries.

Indeed, the contribution of education has been doubly significant: both the quantitative provision and the qualitative improvement of the industrial work-force. First was the role of supplying an adequate quantity of various types of workers required by the rapidly industrialising society. The second was elevating the level of the quality of the managerial and technical manpower demanded by both private and public sectors in successive stages of industrialisation.

The government has also emphasised vocational and technical education within the formal school system as an integral part of its larger development strategy from the very early stages of implementing economic development plans.

This paper presents the background, evolution and problems of public education in a country undergoing rapid and dynamic expansion of the economy. In this vein the paper discusses how the human resources development system, particularly the formal school system, has expanded in modern Korea, how it has been linked with and contributed to economic development process and what problems and challenges it is facing.

In this attempt, the focus of discussions will be on changes in policies affecting various levels of schooling with respect to human resources development. The discussion will then deal with a brief assessment of the current status and some problems faced by the national education system. Finally, a brief discussion on the challenges and prospects of Korea's future education system will be made.

Educational Policy Expansion and Human Resources Development in Korea

Education goals and the school system

The general goals and philosophical ideal of Korean education, reflected in Article 1 of the Educational Act of 1946, form the basis of the provision of national education and standards for educational efforts in Korea. The Article adopts 'Hong Ik In Gan', which means "Universal benefit for all mankind", as the virtue of individuals and society. In addition to democratic ideals and national development, it emphasises competency development and character perfection to promote self-realisation and national development. Although it has been subjected to variation in interpretation with the changing demands of times, it serves as the basic ideal or standard for national education in Korea.

The modern schools were first introduced in the 1880s by Christian missionaries. A Royal Decree for Educational Reform was announced in 1885, through which modern state schools, including primary schools, normal schools, and vocational schools were established in the capital and provinces. Many private schools were also found around the country. However, in the period 1910 to 1945 there was a Japanese colonial education when Korea's own identity was lost (Kwak, 1990).

The current school system took its form after 1945. The government adopted a 6-3-3-4 ladder system known as the American model as the formal school system in 1949. Enrolment in primary school reached its universal level by 1960 and secondary schools by 1980. Today, as of 1991, the enrolment rate is 100 per cent for primary school, 95 per cent for middle school, 88 per cent for high school and 38.1 per cent for higher education.

Educational policies for human resources development

Over the past several decades the major educational policies for economic development in Korea have been directed toward: providing universal primary education, strengthening vocational-technical education at the secondary level, and expanding enrolment in higher educational institutions, including junior technical colleges.

The educational programmes for economic development along these lines have attempted to make the educational system more responsive in meeting the human resource requirements of industries. In this way, the school system, with strong initiatives from the government, has been taking an active role in providing the basis for the supply of manpower geared to particular industrial needs in succeeding stages of Korean economic development.

Provision of universal primary education. One of the distinct features of Korean education in modern history has been the quantitative expansion of the educational population. In 1945, when Korea was liberated from 36 years of Japanese colonial rule and more than a thousand years of dynastic rule, only 30 per cent of the six to eleven-year-old age group were enrolled in schools (Kwak, 1990). The Korean War of 1950, which had lasted three years, virtually destroyed all of the few available school facilities.

One of the first national policies implemented by the government was the campaign to stamp out illiteracy. The literacy effort had been geared not only for school-age children but also for adults. Through massive literacy efforts and with the implementation of compulsory education, a great reservoir of unskilled workers became available to meet the demands of the manual industries during the 1950s.

In the 1960s, vocational education programmes also expanded at the secondary school level to meet the rapidly increasing demand for skilled workers. Various educational programmes and skill-training programmes, each with distinctive characteristics, were also implemented in response to the growing diversification of the industrial structure.

In order to respond effectively to the increasing demand for skilled workers, various forms of technical high schools were established, with each of their functions highly specialised. The highest priority was given to building mechanical high schools, which produced precision-machine workers, with administrative and financial support from the government. Technical high schools also produced skilled workers to fill the manpower requirements of Korean industrial firms abroad.

Development of technical colleges. The increasing shift towards capital-intensive industry in the seventies brought new needs to adjust manpower policy: qualitative improvement of skilled workers, and increasing the supply of middle-level technicians. This required the redirection of educational policy to promote the development of junior technical colleges, offering two-year post-high-school programmes.

The government, now realising the importance of training technicians, made massive investments in junior technical colleges. However, the technician education system faced a number of serious problems: negative public images of the programme, as well as the quantity and quality of technicians it was producing. In response, the government launched the Long-Term Technician Education Development Plan, funded by an IBRD loan and a matching fund from the government. This plan has played a vital role in upgrading the overall quality of junior technical college education in Korea.

Expansion of higher education programmes. Since 1945, the segment of the population enrolling in higher education institutions has also shown a remarkable expansion. The

higher education student population has reached almost 1.5 million by 1987 as compared with 7 819 in 1945. The figure in 1987 was 190 times larger than that of 1945.[1]

Higher education expansion was particularly dramatic in the fifties and the increase slowed down in the sixties and early seventies.

However, it again shot up in the late seventies. The huge increase of college students in the fifties was primarily due to the great enthusiasm for education that had been suppressed under the colonial regime (Kim, 1979) and the policy of open entrance to higher education institutions implemented by the Ministry of Education further accelerating the trend (Yun, 1979).

The increase of higher education population from the seventies was rather uneven. As a result of the severe control on the increase in higher education, with aims to focus on the qualitative improvement of college education and to maintain a balance in the demand and supply of high-level manpower, the number of students had increased by only 48 per cent during the five-year period from 1970 to 1975[2] However, it showed a drastic expansion again in the late seventies and eighties.

In the eighties, the drastic nature of increases in the number of students resulted from sudden expansion of the government enrolment quota of college students. This measure aimed to solve the accumulation of examination repeater groups and the overheated college entrance examination (Kim, 1981).

The drastic nature of expansion can be seen clearly if the changes in the enrolment ratio of college-age population (18-21-year-olds) are examined. The enrolment rate to higher education (Table II-1) was about 3 per cent in the early 1950s, 6.4 per cent in 1960, 9.7 per cent in 1970 and above 10 per cent in 1975. However, the ratio began to jump since the late 1970s to reach 16.5 per cent in 1980. But the big jump came in 1980.

With the new enlargement of enrolment quota, an additional 30 per cent and 15 per cent of high school graduates were admitted to colleges and junior colleges, respectively. As the number of students began to increase suddenly, almost 38 per cent of the school-age population were attending higher education institutions in 1986. And, the enrolment ratio more than doubled within a few years since 1980.

Clearly, the opportunities for higher education have expanded massively in Korea, in terms of the size of the increase and the drastic jump in the enrolment rate.

Then, why the sudden increase of the enrolment quota? The answer will become clear if the changes in supply and demand of college graduates are examined. It can be seen in Table II-2, the number of college graduates decreased to an average yearly rate of 4 per cent in the period 1965-1969, while employment increased at 0.7 per cent during the same period. During 1970-1979, the number of graduates increased at the rate of 7.3 per cent per year, whereas employment has grown at the rate of 9.9 per cent.

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1 Here, higher education population includes those attending two year junior colleges and graduate schools, but those attending four-year colleges alone recorded more than one million.

2 This is to say in a relative sense, in comparison to a much higher rate prior to this period.

Table II-1. Enrolment Rates by School Level
(%)

Year	Primary	Middle	High	College/Univ.
1953	59.6	21.1	12.4	3.1
1955	77.4	30.9	17.8	5.0
1960	86.2	33.3	18.9	6.4
1965	91.6	39.4	27.0	6.9
1970	102.8	53.3	29.3	9.7
1975	106.1	72.6	41.8	10.3
1980	102.1	95.7	66.6	16.5
1985	101.0	101.0	79.0	35.1
1986	100.2	103.1	81.3	37.8

Note: *Enrolment rate indicates percentage of students among the relevant school- age population.*

Source: KEDI, *Educational Indicators in Korea*, 1986. UNESCO, *Statistical Yearbook*, 1974.

Table II-2. Changes in College Graduates and Employment

Year	Graduates	Increase (%)	Employed	Increase (%)
1965	36,180		12,546	
1966	26,166	-38.3	10,084	-24.6
1967	22,338	-17.1	10,123	0.4
1968	26,974	20.8	13,938	37.7
1969	22,648	18.9	12,659	-10.1
1970	23,515	3.7	13,743	8.6
1971	27,168	15.5	14,448	5.1
1972	29,544	8.7	15,078	9.7
1973	28,776	-2.7	16,139	7.0
1974	30,153	4.8	17,277	6.7
1975	33,610	11.5	19,635	14.0
1976	34,725	3.3	21,299	8.5
1977	37,374	7.6	22,087	3.7
1978	41,680	11.5	32,057	45.1
1979	45,424	9.0	29,378	-9.1
1980	49,735	9.5	28,340	-3.6
1981	55,846	12.3	28,524	0.6
1982	62,688	12.3	38,988	13.1
1983	77,272	23.3	38,489	13.2
1984	90,888	17.6	43,907	14.1
1985	118,584	30.5	48,552	10.6
1986	137,848	16.2	51,667	6.4
1965-69		-4.0		0.7
1970-79		7.3		9.9
1980-89		17.4		7.8
1965-86		7.9		7.5

Source: MOE, 1965-1986

The Korean economy was growing rapidly with an annual GNP growth rate of above 10 per cent in the early seventies and of 12 per cent between 1976 and 1978. The demand for highly educated workers in high level occupations has accelerated particularly in the second half of the seventies. Between 1970 and 1975, the increase of jobs in occupations traditionally employing college graduates -- e.g., professional/technical, administrative/managerial and clerical occupations -- was about 350,000.

During the same period, the graduate supply of higher education, including two-year junior colleges and graduate schools, was about 200,000. This indicates a clear shortage of college graduates.

During the period of 1975-1980, the rate of increase of above three high level jobs accelerated: There were increases of about 550,000 in these occupation groups. However, the supply capacity of higher education was merely about 280,000 during the same period. Thus, the shortage of college graduates has worsened in the second half of the 1970s (Park, 1983). The demand for highly educated workers was consistently rising while the supply has not kept pace with increasing demand.

The enrolment quota policy maintained by the government has never met the massive social demand for college education since Korea's liberation in 1945. In spite of rapidly expanding industrial (and social) demand for college graduates, the Ministry of Education had long applied a rigid enrolment quota system for higher education. Consequently, during the latter half of the 1970s, the rise in the supply of college graduates was far less than the dramatic rise of demands created by rapidly expanding requirements of the Korean economy. Increasing industrial demand for college graduates and continued restrictions of the enrolment quota have further fanned social demand for higher education in the late seventies. And, the extremely competitive climate for college entrance examinations became a major social issue. This was expressed by the accumulation of a large pool of entrance examination repeaters.[3] And, the government had opted for a hasty measure to increase the enrolment quota to accommodate the explosive demand for college entrance and to deal with the problem of entrance examination repeaters. The pronounced scarcity of college graduates in the late seventies and continuing pressures to deal with the problem of repeater groups led to the subsequent enlargement of the college enrolment quota in 1981. However, even the sudden expansion of enrolment quota was not sufficient to meet the ever-increasing demands for college spaces.

Nevertheless, the measure adopted in 1981 was too drastic and abrupt. The changes in the quota were made with little consideration of their potential impact upon future labour markets.

Students entering college after the 1981 expansion of the college enrolment quota were due to graduate in 1985. And the unemployment rate among college graduates greatly increased, surpassing that of high school graduates. The reasons were: the sudden and excess supply of college graduates due to enrolment expansion in 1981; and the cyclical downturn of the Korean economy in the early eighties. The Korean economy began recovering in the late eighties, due to a favourable exchange rate vis-á-vis the yen, oil price cuts, and low interest rates. Nevertheless, the high unemployment rate among college graduates has not receded and the problem continues to date.[4]

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3 According to a Ministry of Education estimate, there were about 74,280 applicants who failed to be admitted to Korean colleges in 1970. This figure had increased to almost 300,000 in 1980.

4 The number of college graduates increased enormously while the rising rate of industrial demand for highly educated workers had slowed down as compared with that of the 1970s. Since the 1980s, the number of college .../..

The paradox of human resources development. The labour market for educated workers in Korea has recently been characterised to be in a state of paradox: shortage of lower-level skilled and temporary workers, and a surplus of white-collar workers. In various sectors of the economy, there is a mismatch of labour supply and demand (and of quality) of educated workers.

The high level of unemployment among college graduates seems to have resulted (in part) from the structural imbalance between the demand in science and technical fields, on the one hand, and the excess supply in the area of non-technical and liberal arts, on the other.

When the Sixth Five-Year Economic and Social Development Plan was in preparation, manpower experts predicted some shortage in science and engineering, but not in the humanities and the social sciences.

But at the implementation stage (of new enrolment quota policy), many private universities (two-thirds of all existing colleges and universities in Korea) preferred to increase enrolment in the humanities and social sciences over natural sciences and engineering colleges (because of the high cost of establishing or expanding facilities in the latter). As a result, the share of engineering college students was virtually kept constant at 21.3 per cent between 1975 and 1987, while those of literature and social sciences have increased quite substantially over the same period; 14.9 per cent and 17.9 per cent, respectively, in 1975 and 20.7 per cent and 28.5 per cent, respectively, in 1987.

Needless to say, high unemployment among college graduates and mismatch between graduates and vacancies in engineering jobs are likely to deepen (Kim, 1990). Still, many high school graduates would rather vie for a restrictive chance of admission into college. Yet, college education does not seem to meet, on the one hand, the social need of an adequate provision of high-level technical manpower, and on the other hand; nor, on the other hand, does it guarantee individual graduates opportunities to find suitable jobs upon graduation.

College fever and the problem of secondary education. The paradox of educated unemployment and persistent shortage of technical manpower exists in Korea. The root of this problem is that education is basically viewed as an instrument to obtain future success through higher income and a better social position. This perception of education is deeply rooted in Korean society.

Formal secondary education is reduced to a mere vehicle to prepare for the entrance examination. Parents demand that schools focus on teaching only the subject matter that is relevant for college entrance examination, at the expense of education for other important purposes, including education necessary for future employment.

... graduates has been on the rise at the average rate of 17.4 per cent compared to the average employment increase rate of 7.8 per annum. The number of the unemployed among college graduates doubled from 60,000 (6.2 per cent in 1980 to over 124,000 (6.9 per cent) in 1986. In recent years, less than 50 per cent of college graduates find employment and the figure is even worse for female graduates. These figures indicate the seriousness of educated unemployment in Korea. The enormous pace of expansion of college students have clearly affected the early employment opportunities of college graduates.

Indeed, the college entrance examination system is one of the most crucial problems facing Korean education, threatening the once productive role of school education, particularly secondary school education.

Children are permitted to do nothing but study, postponing everything else until after the examination. All school activities, including classroom teaching, tend to be focused on preparing for the examination. Since the competition to enter college, particularly first-ranking universities, is so intense lessons at lower school levels often deviate away from required curricula to prepare for the college entrance examination.

Future industrial society requires individuals who can reason quickly and critically, be creative, lead and serve society, and socialise. But what is happening in the classroom remains oblivious to such needs. Concerned educators fear that education has been reduced mainly to memorising factual information.

It is important that students at an earlier age be given some basic knowledge and practical skills to enhance their chance of employment upon graduation. Students at early ages should be exposed to some type of vocational and technical training and the good time to do this is their middle or high school years. However, motivating the students to do so is not so easy. Given the pervasive desire to go to college, there indeed is great waste of manpower resources currently in Korea.

Only one-third of all high school graduates are accepted by colleges and universities. The remaining two-thirds either enter the labour market or stay out of the labour force. This majority of non-college-goers are not prepared for employment at all. They would have benefited more if middle and high school curricula included some occupational preparation.

Meanwhile, those who fail to enter college must suffer from having to redirect their training from college entrance preparation to a vocational track. In either case, waste is the result.

In recognition of this problem, the Korean Government has recently been implementing various measures in support of policy to restructure the secondary school system toward greater vocationalisation. In 1991, the government called for a major revision of the nation's system of secondary education with greater weight given to vocational and technical education. The plan calls for drastic re-education of humanities students and increase of vocational track students. This is a direct response to the industry's call for greater vocationalisation of high schools. Yet the road to vocationalisation is riddled with obstacles and controversies.

These include the difficulty in the provision of massive funds for costly facilities and equipment for existing and new vocational schools. There is also the basic controversy surrounding justification and validity of "hoarding" children into a vocational track against the widespread sentiment of the parents and students favouring a humanities track. The goal of moving towards vocationalisation of secondary school education is still remote with many challenges and tasks to be resolved.

Prospects and Challenges

Despite the gloomy picture presented on the current problems of a formal education system and the paradox of human resources mismatch, Korea is expected to develop into a highly industrialised society. The labour-intensive industries that formed the bulk of the industrial

structure in the past will likely be increasingly reorganised into technology- and capital-intensive industries. During the next decade, the demand for technical manpower will continue to increase sharply.

This prospect suggests that the importance of high and middle-level technical manpower (engineers and technicians) will expand in significant proportions. In particular, the demand for high-level science and technology-related manpower will also greatly increase.

There remains the continuing challenge of how to enlarge the base of skilled and middle-level technical workers while at the same time producing a large number of the needed high-level or professional manpower.

This challenge of enlarging the base will provide further pressure so that opportunities for higher education be expanded. This calls for a re-thinking of the existing student quota policy and a commitment to allow greater autonomy to individual institutions of higher education. This is a delicate matter, however, since the expansion of the quota for higher education is the very cause of the emerging problem of unemployment among highly educated workers.

Also, expected changes in the nation's industrial and manpower structure require a serious reappraisal of the productiveness of the existing system of vocational and technical education. In the past, the primary responsibility of training manpower lay with the formal education system, and the formal system has played a valuable and responsive role when the industrial and occupational structure of the nation depended primarily on a labour force with relatively simple skills and basic levels of education.

However, as the economy and the industries advance, a critical review is necessary, as to how the human resources role of the formal school system may be altered and modified to meet changing demands. It also calls for more private initiative and an increased burden of private firms in training manpower, the benefits of which accrue to themselves.

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3.3 Educational Reform in Hong Kong

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Introduction

The post-war period in Hong Kong has seen the territory achieve one of the fastest rates of economic growth in Asia. It has also seen the introduction of a range of educational reform measures. The 1960s and 1970s saw respectively the massive quantitative expansion of primary and secondary education provision. This was largely in response to the rapid growth of the school-age population and to rising expectations. By the late 1970s nine years of compulsory education was achieved. The 1980s was a period primarily devoted to attempts to improve the quality of schooling. These efforts have continued into this decade but the main outcome of educational reform in the 1990s will involve attempts to expand rapidly the opportunities for higher education. This paper reviews the influences on educational reform and describes the major current reform initiatives which are being pursued.

The Structure of Education

The educational system follows the structure of the English system and is thus based on a 6:7:3 pattern. In two respects the system differs from that of the colonial power. Pupils start primary schooling at the age of six and over 90 per cent of pupils attend kindergartens or child care centres between the ages of three and six. The pre-primary sector is not publicly funded. The majority of schools are operated by aided agencies which mainly comprise religious groups and benevolent societies. The role of the government is primarily to supervise and support the work of these agencies. Fig. 1 shows the various routes and key points of assessment within that structure. A common point of entry to tertiary education has only recently been achieved. Prior to 1992 pupils could enter CUHK at the end of form 6.

The Context of Reform

The impetus for and pressures to pursue educational reform arise from a complex interaction of economic, social and political factors. Fig. 2 provides a diagrammatic summary of the nature of those influences in the post-war period. Two factors have provided a consistent influence on the educational system in the post-war period, namely people and politics. Large influxes of refugees from China in the late 1940s, 1950s and 1960s created a need to provide housing and education. Currently the educational system is feeling the impact of the successful attempts in the 1960s to reduce the rate of population growth. The school age population is now dropping and this is being used as an opportunity to improve the pupil:teacher ratio in primary and secondary schools. Politics, especially those of an exogenous nature, have served to influence the educational system both directly and indirectly. The largely unpredictable nature of these influences during these periods has meant that much educational reform, especially that which has had a substantial long-term impact, was the result of a mixture of survival and crisis intervention. In contrast many of the attempts at long-term rational planning were unsuccessful. The 1940s and 1950s for example saw the government trying to reduce the influence of the Chinese Communist Party and Kwomintang in schools. The regulations which define the relationship between the aided

sector and the government are derived from that period. Similarly, the apolitical nature of the school curriculum and the provision and location of government schools have their roots in that period. More recently, the impending return of Hong Kong to the sovereignty of the PRC in 1997 has had an influence on all sectors of society, including education.

The Education Commission

In 1984 the Education Commission was established following the recommendation of a report by an OECD panel in 1982. Its purpose is to advise the government on overall educational policy. This was the first body which had a remit to advise on all sectors of the educational system. Other advisory bodies focus on a specific sector within the system. The fourth and fifth reports of the Commission were published in 1990 and 1992 respectively. Together they have attempted to improve the quality of education. ECR4 focused on schools and its major recommendations were:

ECR4: The Curriculum and Behavioural Problems in Schools

- The establishment in the Education Department of a Curriculum Development Institute. Designed to create a full-time professional body dedicated to improve the quality of curriculum development in schools, this body was established in 1992.

- The introduction of a "whole school approach" to guidance and counselling. This involved the transfer of Student Guidance Officers from the Government Education Department to primary schools and the expansion of the training opportunities for Educational Psychologists.

- Measures to improve educational opportunities for children with specific educational needs. These include: a pilot project to develop school-based programmes for gifted children, the introduction of remedial support programmes and the establishment of two types of special schools for academically unmotivated pupils.

- The introduction of a system of assessment (targets and target-related assessment) which will provide a framework of attainment targets based on criterion-referenced principles. This will result in pupils' level of attainment being tested at P.3, P.6, and S3.

- A language policy which incorporates the following principles: secondary schools should be encouraged to use Chinese as the medium of instruction, individual schools should decide whether to use English or Chinese, and the use of mixed code should be reduced in favour of the clear and consistent use of Chinese or English. Pupils will also be assessed at P.6 to determine their ability to learn effectively in Chinese or English.

- The introduction of whole-day primary schooling by the year 2000 through a system of mixed-mode schooling. This involves phasing in whole-day schooling initially for pupils in the upper primary forms.

To date some progress has been made in implementing all of the above-mentioned policies with the exception of the last mentioned. The public reaction to that proposal demonstrated substantial misgivings on the part of primary school personnel in terms of its effect on their status

and career prospects. This, along with the substantial resource implications of a move to whole-day schooling has resulted in the modification of the policy to achieve whole-day schooling over a longer time span. The introduction of a new system of target-related assessment is encountering major problems of implementation as its purpose and practicality are becoming less clear with time. It is also probable that secondary schools will continue to use a mixed language code unless they see that the costs to the school (as opposed to the pupils) outweigh the benefits. This will be difficult for the government to achieve given its very tenuous legitimacy and limited tenure.

ECR5: The Teaching Profession

Proposals regarding the teaching profession were published in 1992 and in February 1993 and were accepted as government policy. The main thrust of the Report was to try and improve the quality of teaching and teacher education. The recommendations will, if accepted, result in a radical restructuring of the systems of teacher education and an improvement in the working environment in schools. The major recommendations were:

- The introduction of graduate posts in primary schools. A target of 35 per cent of graduate posts in primary schools should be achieved in 15 years. Graduate teachers are paid more than non-graduate teachers.

- The provision of self-funded part-time degree courses to allow 7 500 primary teachers to obtain relevant degrees by the year 2007.

- To improve the working environment in schools through programmes for the induction of new teachers, enhanced co-operation between schools and parents and the encouragement of school-based management. Recommendations were also made to provide rooms in schools for non-teaching activities.

- A reduction in teacher workloads through an improvement in the teacher/student ratio from 1.2 per class to 1.3 and 1.5 in bisessional and whole-day schools respectively. The decline in the school-age population will also be used as an opportunity to reduce the class size by five places.

- The disestablishment of the Colleges of Education from the government and the creation of an autonomous Institute of Education under its own statutory Governing Council. The new Institute will aim to offer degree courses as soon as possible and substantial additional resources will be provided to allow them to improve their facilities. An attempt will also be made to consolidate the Institute on a smaller number of campuses. At present the Colleges are housed in ten different locations.

- The establishment of an Advisory Committee (Advisory Committee on Teacher Education and Qualifications) to co-ordinate teacher education policy and to provide authoritative advice on teacher qualifications. The status of teacher education qualifications from the PRC, Taiwan and the Commonwealth will have to be defined by this body. The increasing tendency of UK higher education institutions to offer offshore qualifications of a short duration and questionable relevance are also a major source of concern.

- Subsequent to the process of public consultation two supplementary proposals were identified. These were the provision in primary schools of a school library and of a

course designed to provide a teacher education programme for graduates working in primary schools.

It is estimated that the implementation of ERC5 will require an additional investment of HK$23.5 billion over 15 years. Many of the proposals will be relatively easy to implement in so far as they primarily require structural or institutional changes. The hoped for improvements in the quality of schooling and teachers will not be automatically achieved.

Tertiary Education Expansion

Whilst the work of the Education Commission has focused on the needs of the school sector the late 1980s also saw a major change in the policy towards higher education. The overall effect of this policy will be to move higher education from a highly elitist system towards a system of mass education.

Prior to 1984 access to education reflected a pyramid structure in which each level of education after primary school was used to de-select those pupils who were deemed unable to proceed to the next level of schooling. Nearly all pupils received primary education and three years of secondary education. About 80 per cent of the relevant age group went on to years 4 and 5; about 25 per cent went on to years 6 and 7 and about four per cent entered tertiary education in Hong Kong. In 1983 the government revealed its plans for tertiary education: the policy was to gradually expand provision locally to six per cent of the relevant age group by 1990 and to eight per cent by the mid-1990s.

The planned levels of access to tertiary education in Hong Kong were radically expanded in both 1988 and in 1989. In 1988 it was argued that Hong Kong's manpower requirements necessitated that the tertiary sector take in 13 per cent of the relevant age group by 1991. In 1990 the Governor, in his annual speech, revised the figure upwards. The policy was for 18 per cent of the relevant age group, or 15 000 students, to be enrolled in first-year first degree places by 1995. Subsequently, in 1992 the target was revised downwards from 15 000 to 14 500 places. This revision was a result of the problems encountered in the implementation of the new targets. The effect of this policy on the total enrolments in first degree programmes is shown in Fig. 3. It is important to note that these figures do not show the total level of access to tertiary education available to Hong Kong students. Many students pursue higher education overseas. In 1991 over 18 000 students left Hong Kong to study overseas.

This policy initiative has been presented as a response to manpower needs and an investment in human capital. An analysis of the context and impact of the policy suggest that it might better be interpreted as a response to a crisis of confidence. The return of Hong Kong's sovereignty to the PRC and the events in Tienanmen Square in June 1989 created a crisis which the government responded to by a massive programme of public spending designed to bolster morale and confidence in the future. This included the massive expansion of tertiary education which still has a very positive rate of return to the individual. Further, the costs of the expansion are incurred over a very long time period. We can anticipate that the consequences of this expansion programme will provide a range of issues which will need to be solved within both the secondary and tertiary sectors of education over the next decade.

The Implementation of the Planned Reforms

The identification of new policy directives is only the initial and relatively easy stage of improving the quality of education. Experience both in Hong Kong and elsewhere clearly demonstrates the frequent gap which exists between what is planned and what is implemented. The successful implementation of the proposals of ECR4 and ECR5 will require that a number of constraints on implementation are overcome. The main constraints which exist are:

Priorities and resources

Clearly no programme of public investment can be considered without regard to its opportunity costs. Other demands on the public purse are equally pressing. Currently, Hong Kong is embarking on one of the largest infrastructure projects in Asia to construct a new port and airport. The resources needed to fund these projects will make it difficult to find the resources to finance the recommendations of ECR4 and 5. Further, the concerns of the PRC that the outgoing colonial government is spending excessively prior to Hong Kong's return to Chinese sovereignty, is placing further pressure on public spending. This could result in some of the proposals being implemented in ways which minimise the short-term costs but ensure substantially greater long-term costs.

Bureaucracy and territoriality

Proposals such as the disestablishment of the Colleges of Education will require that the Education Department relinquishes its control over teacher education and that the new Institute is established in a manner which allows it to pursue its goals. Relinquishing power is not readily achieved within a government bureaucracy in which status and prospects are closely linked to control and territoriality. Within the Hong Kong Government specifically the proposals of the Education Commission are perceived as emanating primarily from the Education and Manpower Branch, which is concerned with policy matters. The implementation of any recommendations is usually the task of the Education Department which performs an executive function. The priorities and perceptions of these sectors within government, which arise from their different roles, has sometimes resulted in a style of implementation which did not maximise the possibilities of success.

Support for implementation and strategies of change

Policies designed to improve the quality of teaching and learning are at the best of times difficult to implement as they often require a change in the traditional role of the teacher and pupil. Such changes require very substantial support. They cannot be achieved through administrative fiat. In-service education, staff development and curricular resources are just some of the necessary inputs to long-term improvement. In the past educational reforms designed to improve the quality of schooling have relied on the classic tools of a highly centralised and bureaucratic system of curriculum development. Policy directives, circulars and other means of disseminating policy have not yet been adequately supplemented by strategies designed to more directly influence teaching and learning styles. Some of the reforms described above bear all the characteristics which are associated with worthy but unsuccessful innovations. The processes of development and the dissemination of innovations has too frequently guaranteed an indifferent or hostile reception by the users. Educational improvements will not be achieved overnight but, especially in Hong Kong at present, there is a desire to introduce instant changes.

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3.4 Diversification of Secondary Education

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A Profound Change in Purpose

Recent years have seen major changes in the patterns of secondary education, as all countries try to adjust to new social and economic circumstances. The most obvious internal changes for schooling have been the dramatic increases in secondary retention and participation. In Australia, for example, where in 1986, only 48.7 per cent of secondary students were retained to Year 12, by 1991 this proportion had risen to 71.3 per cent and in 1992 is over 75 per cent. The target recommended for Australian education by the Finn Committee is for 90 per cent to complete Year 12 or equivalent by 2001. That target would imply retention rates of almost 100 per cent into the Year 12 stage.

The change in numbers, dramatic as it is, is symbolic of a more profound change, one in purpose. Much of the proclaimed thrust of that change has been economic. In many countries education reform has followed the global trend of restructuring in the State sector to meet national economic goals. The achievement of a competitive international advantage through a more productive and highly skilled workforce has become a major goal for education systems. In countries where the tradition has been very different, the enactment of legislation for a national curriculum has been a major strategy in achieving that goal.

In the last decade, we have seen the curriculum become a subject of national policy, as explicitly as the economy, health and defence.

> "...the curriculum of schools is now part of the public policy agenda in this country. In the same way that policies concerning a nation's trade, foreign affairs, industrial relations and defence are exposed to public debate, scrutiny and change, so too the curriculum has become the focus of attention for governments and all criticisms and groups who are influenced by it. Such a notion contrasts markedly with the notion that the determination of the curriculum is largely a matter of professional judgement or is best left to the school community. In the 1980s and 1990s, the curriculum has become an instrument for national development rather than a means whereby individuals can learn and grow in a personally fulfilling way." (Kennedy, 1991).

This pattern is one that has occurred in other countries, like Australia, where there was no tradition of a national curriculum. Peter Watkins of the National Curriculum Council in England, said recently in Australia:

> "...until recent years we have prided ourselves on the absence of a national curriculum. We regarded a national curriculum as characteristic of foreign educational systems such as those of the Japanese, the Germans and the French but alien to our English liberal tradition. We have moved in England towards a national curriculum because we became increasingly aware of the need to set out what it was that the education system aims to provide for all children." (Watkins, 1991).

England and Wales, in defining what the education system "aims to provide for all children", is following a similar direction to that in New Zealand, USA and Australia, in spite of their differences in the organisation of education. In all of them a common pattern is being enacted: more responsibility is being directed to individual schools under the title of "self-management" while at the same time there is a national priority to define common elements and a common framework for the curriculum, together with more explicit ways of recording student achievement.

For England and Wales, that common agreement is expressed through the 1988 Education Reform Act, which had three emphases, of which one was the National Curriculum. This specified, in addition to the already required Religious Education, eight foundation subjects: English, Mathematics, Science, Languages, History and Geography, Art and Music, Physical Education and Technology. All students were required to be assessed in these areas for achievement at ages 7, 11, 14 and 16, using ten levels of achievement for all students.

New Zealand has also moved to require individual schools to manage their own affairs, including finances, in the framework of a National Curriculum specifying seven learning areas: Language (which includes English), Mathematics, Science and the Environment, Society and Culture, Art, Physical Education and Personal Development and Technology. The New Zealand legislation also defined six areas of Essential Skills: Communication, Numeracy, Information-handling, Social, Problem-solving and Decision-making, and Work and Study. Again, student achievements will be defined and reported at ten levels.

The United States has moved in a similar direction, but not so decisively at this stage. The initiative by the President called *United States 2000* specifies studies in five core areas: English, Mathematics, Science, Languages, History and Geography. Student Achievement would be determined at Years 4, 8 and 12, using a number of achievement levels as in the other instances.

In Australia, while there are many initiatives still unresolved, there are strong similarities. The Australian Education Council, AEC, reached agreement in 1989 on ten common and agreed goals (HEC, 1989). This included the specification of eight common areas of learning as a basis for a national approach to curriculum: English, Mathematics, Science, Languages, Society and Environment, Arts, Health and Technology. A national agency, the Curriculum Corporation, has been established to carry out curriculum mapping, i.e. description of the current curriculum situation, throughout Australia. Following the mapping, the Curriculum Corporation has begun to develop curriculum framework statements, initially in English, Mathematics and Science. Assessment of students will occur through national profiles, using eight achievement levels in knowledge, skills and understanding. As we will see, this approach is intended to be developed further, following three reports, by Finn, Mayer and Carmichael.

What are the influences which have brought about such consistencies of approach in formerly diverse situations? It is important to understand these, partly as a basis for understanding the context of change and partly as a means of identifying useful ways of responding.

One aspect of the reasons is cost. At the beginning of the century Australia had a total of five per cent of its population in formal education. By the mid-1900s, this proportion had risen to 10 per cent. It stands currently at over 20 per cent. It is thus a major competitor for finance at the Federal level: to reduce the student:teacher ratio by one student in every class, would cost $400 million each year.

There is, however, a more positive incentive, one that is enunciated by all these societies. This is the incentive to be more economically competitive in a world where technological development has made unskilled and low skilled jobs redundant. This brings two complementary effects. It creates unemployment, raising the demand for more education for the young and vocational retraining for the older. It creates a demand for more flexible and higher level skills in the existing work-force, bringing a continuing need for further training. Laurie Carmichael, as a member of the National Board of Employment, Education and Training, NBEET, stressed this point:

> "The demand for and appreciation of quality means a reorganised work-force where human resource management is fundamental, where decision-making occurs at the level of the individual worker, where skill is applied minute by minute, where workers are involved in management through consultation and application of their knowledge and skill, and where small highly competent teams replace the production line" (Carmichael, 1990).

Compelling as is the argument for more productive ways of organising work the impact of the changes on other areas of society are also important. At the school level, the effects are immediately obvious. In Australia, as recently as 1966, 60 per cent of the 15-19 age group had full-time jobs, by 1992 that proportion had fallen to 10 per cent. An accompanying effect has been the dramatic rise in Year 11-12 retention rates, exemplified by a change from 48.7 per cent in 1986 to 71.3 per cent in 1991. While this has substantially reduced the unemployment rates for young people, and is a successful result of government policy, it is by no means a satisfactory resolution of the situation, either for employment or education. This will be taken up later in the paper. In all the countries considered, however, it is the national priority for "a more productive work-force" that is the mainspring of the emphasis on longer and more effective education.

There is a further aspect that needs to be acknowledged in all these situations. The approach taken at the political level indicates a lack of trust of those involved in education. Implicitly, schools are seen not only as part of the means of solution of the problem but also as part of the cause. It is for this reason that there is more political control and decision-making centrally for education, and that the devolution of responsibility to schools is in the context of a greater emphasis on assessable outputs, by which the schools' effectiveness and efficiency may be judged.

A question which emerges with increasing force in this situation of national priorities is whether this powerful and popular emphasis on economic productivity may not endanger the recognition of the needs of individuals.

The Current Situation -- The Economic Agenda

In Australia, the thrust towards greater economic productivity through education and training is expressed powerfully through three recent reports, by Finn, Mayer (still in production at the time of writing) and Carmichael. These three reports are developing a consistent agenda to which Australian education will need to pay heed. Brian Finn from IBM Australia, Eric Mayer from the National Mutual Life Association and Laurie Carmichael from the Australian Council of Trade Unions, represent the very direct interest and intervention of business and industry in education. It is a concern that education cannot ignore since it operates through some of the key bodies in education, the Australian Education Council, AEC, the Ministers for Vocational Education, Employment and Training, MOVEET, and the National Board of Employment,

Education and Training, NBEET. The language that they speak is consistent and strong and expresses the interests of the business and industry sector, including the trade unions.

It is a language concerned with the outputs of education and training. The Finn Report identified six broad areas which they considered were essential Key Areas of Competence for all students in the post-compulsory years. The Committee further recommended that all states and territories should develop valid and publicly credible, nationally comparable ways of assessing young people's attainment in terms of the National Competence Profile levels in the six Key Areas, with reports on their level of competence to be provided to all young people at Years 10 and 12 in schools and Technical and Further Education (TAFE) (Finn, 1991). These findings were referred to the Mayer Committee with the terms of reference:

"To explore further the concept of key competencies --

- survey work underway in the school and TAFE/training section in Language and Mathematics to advise on the feasibility of bringing it together to develop useful national profiles; and

- advise on the feasibility of a similar exercise in each of the other key areas" (Mayer, 1992)

In carrying out its task, the Mayer Committee has identified three other key competencies, creativity, family and household management, and, information technology. The Committee has also proposed some criteria by which the appropriateness of key competencies might be judged. These include:

"• essential to preparation for employment;
- equips people to participate in a wide range of settings, including workplaces;
- general rather than industry-specific;
- able to be taught (i.e. developed);
- conceptually coherent;
- involves application of knowledge and skills; and amenable to credible assessment." (Mayer, 1992)

The Committee indicates that within each key area of competence, there will also be a number of sub-headings or strands which are groups of competencies providing examples of ways in which the knowledge and skills of the areas are applied in workplace contexts. However, it is instructive to note the difference already developing between the Finn and Mayer competencies.

Finn describes six Key Areas of competencies:

Language and Communication
Mathematics
Scientific and Technological Understanding
Cultural Understanding
Problem-Solving
Personal and Interpersonal

In the last category, the Report included such areas as ethics.

The most recent draft of Mayer includes the following headings:

Expressing information and ideas to others	Collecting, analysing and organisation information
Using mathematics to solve a problem	Using mathematics to represent and interpret information
Using Technology	Working autonomously
Interacting with others	Solving problems

The two lists differ in more fundamental ways than might first appear. The difference does not lie just in the greater detail of development in the Mayer pattern. More remarkable is the narrowing of focus. The Mayer list has eliminated many of the more general elements from Finn, including such areas as critical thinking, creative thinking, self-esteem and ethics. While these areas were never considered in appropriate detail or complexity under Finn, their omission by Mayer turns the list of competencies into a much more restrictive and limited approach.

There are other difficulties. The strong vocational emphasis may be seen by many educators as being reductionist in character, singling out just one of the many legitimate and valued goals of education. While the reports themselves do emphasise that they are dealing only with the vocational aspect of general education, there would seem to be rather small scope for other priorities. The Finn Report says that it "encompasses all aspects of education other than that small part of education which has no clear vocational character." (Finn, 1991).

The Mayer Committee addresses these criticisms and the related one that what they are defining is a minimum competency model, constraining many young people from reaching their potential. Alternatively it could be claimed that the competencies are of such a high order that they will condemn many young people to failure. Mayer faces these issues through its approaches to assessment and reporting for key competencies. Specifically, the Committee envisages:

> "The challenge is therefore to develop a nationally consistent framework for assessing and reporting competencies based upon an agreed set of principles and supporting materials." (Mayer, 1992)

The benefits of such a framework are seen as:

- "· better information for young people;
- · benchmarks to inform teachers'/trainers' professional judgement;
- · nationally consistent credit transfer arrangements;
- · better information to meet public accountability needs;
- · better information for monitoring programmes designed to meet needs of identified groups; and
- · improved capacity to establish and monitor standards and set goals for improvement." (Mayer, 1992)

Before Mayer had completed its task, a further contender entered the lists, to champion the same cause. Laurie Carmichael, as Chair of the Employment Skills Formation Council, one of the three councils of NBEET, reported in March 1992 to the Minister for Employment, Education and Training and to other Ministers of AEC and MOVEET to outline a staged strategy for meeting Australia's training needs in 2001. The arguments are similar to those of Finn and Mayer: that change is needed to improve international competitiveness, to complement changes in work organisation and industrial relations, and to improve the coverage, quality and equity of vocational training in Australia. The proposal is for a competency-based Australian Vocational Certificate Training System, focused on outcomes, the attainment and demonstration of specified knowledge, skills and application by an individual, rather than inputs such as time served. Under this proposed pattern, a target of 90 per cent of young people to complete Year 12 or equivalent is defined for the year 2001, with more vocational options in Years 11-12, more extensive use of contextual learning methods, the nation-wide development of public and private Senior Colleges for upper-secondary programmes. Year 11 and 12 students in Senior Colleges, under this scheme, would be able to acquire vocational competencies to a defined level (ASF certificate level 1) as well as the general key areas of competency, i.e. the Finn and Mayer areas, either during the school years or through structured work experience after completing school. In order to achieve these targets, an extra input of $1.2 billion of Commonwealth expenditure is proposed on vocational training by 1998. This is a comprehensive and ambitious programme, but one that is entirely consistent with its two predecessors.

The thrust for achievement of defined competency levels, in both general and vocational competencies for 90 per cent of the age-group must be seen in the context of the current situation where as Ann Morrow states "There is widespread concern that there remains an unacceptably high number of students leaving school with no qualifications at all. These early school leavers are either joining the ranks of the unemployed, or accepting lowly paid, unskilled work with meagre prospects." (Morrow, 1992) If we take account of the early leavers and of those who finish Year 12, still without a recognised qualification, the "unacceptably high" proportion would amount to more than 50 per cent of the age-group. From this base, to reach the 90 per cent targets envisaged for 2001 by Finn and Carmichael is a formidable task.

To make it more difficult, while these proposals have the strong support of business and industry, they are not widely accepted by teachers in schools, or educators generally.

Where do We Go from Here?

There is a potentially damaging conflict inherent in this situation. We have a set of proposals with major implications for schools, put forward by government bodies, with both Commonwealth and State links, and with strong support by business, industry and the union movement. These proposals are strongly related to a major national concern, very high unemployment levels, which is also a highly personal issue affecting many Australian families, particularly with respect to even higher levels of youth unemployment. Our society, like others, faces the possibility that many people might never gain employment during their lives.

These pressures, as Garth Boomer has pointed out, are among the contributors to a wide concern about education in Australia.

> "These three sources (the Industry Education Forum, Finn etc. and the White Paper on Languages and Literacy in Australia) are by no means the only

external identifiers of problems but they are indicative of a growing unease around Australia (no doubt linked to the precarious state of the economy) about the quality and performance of our schools." (Boomer, 1991).

For their part, educators are likely to feel a sharp sense of injustice. The pressure coming from high levels of unemployment, while acknowledged as valid, is not seen as the responsibility of schools. Unemployment is seen as the result of economic and technological change, and not any failure of schools. Nor can the solution of this problem be in the hands of schools. They may give high levels of preparation to all students, but if there are not enough jobs, all they will have done is to produce better-educated unemployed, perhaps more frustrated unemployed.

Further, educators would argue that their current work is more successful, not less successful than in the past. They feel affronted by and hostile to the argument that schools are failing, because they genuinely believe that more students are reaching higher standards of performance, and in a wider range of areas, than ever before.

There is a real danger that these two sets of views will become more intense and more entrenched, with both sides talking at each other rather than to each other. In such a situation the likely losers will be students who will be working in an atmosphere of uncertainty and conflict.

Where there are two such radically conflicting views, it is likely that both of them have a valid basis and that any resolution depends on a dialogue which will develop a comprehensive and inclusive view of the situation. To do this, both sides need to listen and to appreciate the more complex truth which really describes the situation. We will consider some of the emphases needed to resolve this situation.

a) An explicit acknowledgement of the broad agenda

The business world must acknowledge more specifically and openly, the broader view of education which is needed for this situation. Just as teachers need to acknowledge, and do acknowledge, the importance of vocational education, others must recognise the importance of at least two other aspects, education for citizenship and education for personal development. The emphasis in the first area is to educate for effective and responsible participation in a democracy, with all that implies for the knowledge, skill, and attitudes required for that demanding task. The emphasis in the second area is on the person, with all the importance that is now attached to making good choices: good choices on health, on personal relationships, on leisure interests and activities. A simple test as to whether you think these are important educational goals is to ask, do you value them for your own children. Few of us would be satisfied with an education limited to vocational preparation -- any more than we would be satisfied with one that ignored it.

The recent draft paper by the National Industry Education Forum (April 1992) is called **Improving Australia's Schools -- Building the Foundation for a Better Australia.** It defines six goals, all of them likely to find substantial agreement in the community. It exemplifies the gap that so often exists, however, between the broad statements of intention and the means defined for achievement. The statement says:

> "Quality education is central to the development of individuals, is sought after and valued by families, and supports a well informed, productive and democratic society. Education also has moral purposes and provides many unquantifiable but real benefits for individuals and the society. These widely

shared purposes of education unite schools, families and the Australian business community."

After this statement which so forcefully argues the case for recognising the three strands of educational purposes, personal, social and vocational, and the central role of moral purposes in education, the statement goes on to emphasise six goals which are very utilitarian and vocationally oriented. It is not what is said that is the problem with these goals but what remains unsaid from the declaration above on quality education. We must be just as rigorous, and just as detailed, in our development of personal and of social purposes, as we are with vocational purposes. The words of Adler point out the urgency of this agenda after a century of compulsory schooling.

> "Basic schooling -- the schooling compulsory for all -- must do something other than prepare **some** young people for more advanced schooling at advanced levels. It must prepare **all** of them for the continuation of learning in adult life, during their working years and beyond" (Adler, 1982).

b) A constructive role for assessment and reporting of student achievement

Schools and teachers must recognise in practical ways the importance of more meaningful and comprehensive assessment and reporting of student achievement. The strong emphasis on methods of recognising outcomes, which is a feature of Finn, Mayer and Carmichael, is related to the powerful feeling reported by Boomer, "...that parents, by and large, wish to know with the minimum of jargon and window-dressing where their children stand, not necessarily in a class pecking order but in relation to others across the state". Our claims from within education that we are doing better than ever may well be true but they remain unconvincing while we do not produce any evidence.

There is a pressing need for teachers and schools to find ways of reporting meaningfully on student achievement, yet to avoid the restricting, least-common-denominator approach of many testing programmes. The subject-profiles approach endorsed by the Australian Education Council would seem to have the necessary characteristics of validity and comprehensiveness, and to meet the needs of both students and teachers: for students, a measure of their progress; for teachers, information on their effectiveness.

Garth Boomer has described the profiles as follows:

> "[Subject] profiles are detailed descriptions of what children will progressively be able to say, do and understand as they move through the guaranteed curriculum as set down by the system. They are the symmetric reflection of the "input" side of curriculum, embodying in performance terms what will result if certain curriculum goals are pursued. The subject profile covers the valued curriculum whether it be oral work, group performance, question-asking skills, research etc. It may do this by 'strands' which are subject organisers. For example, in Mathematics, the national strands are measurement, number, space, algebra and data.
>
> In Australia, a decision was taken by participating systems to describe the spectrum of progressive achievement from Years 1 to 10 in terms of six arbitrary levels relating loosely but not directly to three bands of schooling (Years 1-4, 4-7 and 7-10)" (Boomer, 1992).

This approach could well provide systems with the information they need, in addition to meeting the requirements of students and teachers.

There is, however, another complication in this issue for education systems and those who finance them. If we are to produce good quality information about student performance, we need to do something substantial about what emerges. That something can range from different structures and facilities, to more money for professional development to address the issues arising from evaluation. We do not evaluate merely to judge performance but also to identify where and how we improve learning. We cannot assume that this task will be easy for it requires us to achieve substantial educational progress for those students who, in the past, have left school with little to show for their time and with few of the characteristics they need to operate successfully in our society. Merely to increase retention is not enough. That retention needs to be of real value to those who continue. This will require a major effort over a number of years and not just a continuation of current practice.

A further concern with the competencies approach was pointed out by Dame Leonie Kramer who commented that the employment-related competencies cannot stand by themselves but should have reference to the content of the curriculum which forms the context for the learning of the skill. Dame Leonie asked the relevant question in relation to one of the Finn competencies "Speaking, reading and listening to what?" She was concerned about the likelihood that such a content-free emphasis might mean talking, reading and speaking about:

> "-- competing environmental, technological and social priorities, as people constantly do, without having contact with the thinkers of the past and without having their experience of the arts -- or their understanding of the present state of knowledge in a whole range of disciplines from archaeology to radio astronomy -- in any way extended." (Kramer, 1991)

This is an issue which is too important to ignore, as it is part of an over-simplistic interpretation of curriculum design which, as Dame Leonie says, is debilitating.

The competencies approach as at present defined is a limited and insufficient approach to the issues of assessment and reporting which could offer us much more powerful means of assisting learning and teaching.

c) The need for major curriculum change across the twelve years of schooling

A third area for attention relates to the special difficulties set for Year 11/12 education by the massive and sudden increase in retention. The post-compulsory phase, as the name implies, was in essence a continuation for those who actively wished to continue.

Yet for many students, even in the period of low retention, there was no great enthusiasm in continuing their education. Students reported levels of satisfaction with their schooling declined from Year 7 onwards until Year 10 where it reached a low point with just under 50 per cent reporting that school was moderately or very satisfactory, in successive studies a decade apart (Power, 1983). Similar results were reported for Year 11, with the only substantial changes occurring where senior secondary colleges clearly brought significant improvements in student attitudes. This was a matter of concern since Year 11, as a year requiring active choice by students to continue on, might have been expected to produce an improvement. Now, with the retention on into Years 11 and 12 more than doubling, the concern should be even sharper, since the bulk of

those new continuers would be from those for whom the earlier years were less successful and less satisfying. It might therefore be expected that the situation would be worse.

A recent study in Tasmania indicates that there is a situation of real concern. In the earlier study by Anderson et al. (1980), Tasmania and the ACT had shown a welcome and strong reversal of the usual Year 11 attitudes to school. The obvious reason for this was the success of the new secondary colleges in establishing a more positive atmosphere for students. The success of the college has been one of the major reasons that many inquiries, such as Finn and Carmichael, have recommended their more universal adoption throughout Australia. In the 1982/83 study of colleges in Tasmania, a major success of the institution itself was in establishing good teacher/pupil relationships. This was second only to Friends/Social Atmosphere as a positive feature. In the 1990 repeat of the study, the table recording the identification by students of Best Features of College Life show that the positive figures for Teacher/Pupil relationship has declined substantially. Where almost 21 per cent saw that relationship as the best feature of colleges, by 1990 that proportion had declined to 9 per cent. (Abbott-Chapman, Hughes and Wyld, 1992)

The likely tragedy of the current situation is that the flood of new continuing students has changed the atmosphere of colleges so much, that their major area of strength is now at serious risk. This represents a failure not only for the new students but also for the former student population for whom the colleges had been so successful.

There is no easy resolution of this situation, for what we are facing is essentially a challenge to re-design the curriculum in a way that meets the needs of a whole generation and not merely half of that generation. This means that we cannot solve the problems of the post-compulsory curriculum in isolation but must see it as part of the whole experience of schooling. For many students entering Year 11, the problems are formidable for they do not have the strengths needed to cope with the current curriculum, and this has been a clear assessment by students themselves in the comparative study of the 1982/89 cohort and the 1990 cohort.

While special measures will be needed for current students, for the future a more comprehensive approach is needed, recognising the necessity for a continuous and effective development over the full twelve years of schooling. This is a task whose importance relates both to individual opportunity and social equity. It is not one which can be solved by individual schools in isolation. The recent comments of Jean Blackburn are relevant.

> "It seems to me that establishing publicly known and acknowledged agreements about the substance of compulsory schooling is now imperative as part of the democratic condition. Participatory processes in the governance of schooling are fine, but they need an agreed substance which has wide legitimacy. From this perspective, I find it impossible to accept that individual school communities have an independent right to determine curriculum policies in the core learning areas. All children, in my view, have a democratic right of access to a commonly-agreed core curriculum, systematically developed across the years of compulsory attendance to increasingly sophisticated levels. The curriculum would embody monitoring processes and remedial action which would ensure the students' own progressive access to further learning. The participatory working of the democratic society depends on a high degree of shared knowledge, meanings and frames of reference. It also depends on some commitment to an idea of the common good beyond self and group interest." (Blackburn, 1991)

This task outlined by Jean Blackburn must form the basis for our reconception of the Years K-10, the development of a common curriculum which can provide all our students with means of making a choice. It is not yet clear whether we will have the vision and the courage to achieve this, although the means are in our hands. The ten agreed common goals for Australian schools make a starting point. The specification of eight areas of learning as a basis for a national approach takes us much further. Difficult challenges lie ahead. In the past, we have retreated behind our state boundaries and decided to go our own way on curriculum: does it make sense for a nation of 17 million to have eight different sets of curricula, or perhaps many more if we go all the way to school-based curriculum?

To provide for the period of compulsory education in our demanding and interdependent society requires that all students have access to essential learnings, to what Jean Blackburn called "commonly-agreed core curriculum". It implies, too, that we need to guarantee agreed basic standards of achievement across the eight areas of learning. These should be principles of equity to which we commit ourselves. If we insist on doing this separately, within our state boundaries, we shall fail for none of us have the size or the resources to bring to the task. If we insist on separating the inputs for the schools away from the general community we shall also fail. This is a task which calls not only for a nation-wide effort but one from all levels and areas of our society.

At the post-compulsory levels, long-term success depends on building a basis of solid achievement in the common curriculum. From there, in Years 11 and 12, the essence of the task is to provide students with various pathways from which they can select on the basis of career and personal interests and capacities. Once again, our liking for boundaries can be a major danger to progress. There are arguments-to-and-fro on the jurisdiction of departments of education and of Technical and Further Education (TAFE) departments, in the provision of post-compulsory courses. Many different organisational patterns exist throughout Australia. Organisational patterns should not be allowed to assume more importance than student access. The key need is for students to have available to them a suitable range of subjects from which to construct particular pathways. The more vocational emphasis of TAFE will be of particular interest to many of the new generation of Year 11 and 12 students who see this stage as an immediate vocational preparation rather than an entry to higher education. TAFE throughout Australia has already made major steps towards the creation of a nation-wide system, using the development of national competency standards within occupations and the push towards competency-based training as a base. Surely, our school systems can do as well, combining their efforts.

In any combined effort, a number of patterns need to be available:

- full-time schooling;
- combined school/TAFE programmes;
- full-time TAFE programmes;
- combinations of work and education, both concurrent and consecutive.

Again this will require an effort of imagination, not only from school systems and TAFE but from the world of business.

The links with business and education must work two ways. Increasingly, education is listening to the voice of business/industry/the trade unions, to help schools make their processes as well as their purposes more relevant to "a productive society". The business world in general must

also provide, through a variety of channels, ways in which students can experience work-study links. This is not just a matter of work experience, but of opening up more channels for career and personal development, recognising that a school-bound structure for Years 11 and 12 is inadequate to the many different needs of the new generation of students.

As we face the reality of the diversification of secondary education we meet an educational challenge unprecedented in history, to prepare a whole generation, not only for work but for full participation in society.

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3.5 A Collaborative Curriculum Project on the History of Regions in and around the Pacific

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The recent Earth Summit -- the United Nations Conference on Environment and Development -- in Rio de Janeiro this year testifies to a growing awareness among people all over the world of the reality of our increasing global interconnectedness. This interconnectedness dictates, more than ever before, the need for students to learn about, and with that learning, to begin to understand, peoples and countries other than their own.

Participants in the Pacific Circle Consortium (PCC) have long sought to promote understanding and co-operation among peoples in and around the Pacific -- a region that has become a dynamic part of the global community. Since the PCC was organised in 1977 under the direction of Malcolm Skilbeck, then Director of the Curriculum Development Centre in Canberra, Australia (Skilbeck and Connell, 1987, pp. 3-4), participants have worked co-operatively on international educational projects such as Bays and Harbours, Ocean Fishing in the Pacific, the Nearby series, Tourism, and the Pacific Children's Communication Project (see David Woods' paper, above).

The most recent phase of PCC initiatives is called *Asia-Pacific Study Projects*. Included in this category are initiatives such as Pacific Cultural Literacy, a study of students' understanding of the peoples of the Pacific and the development of materials based on the information gathered; Asia-Pacific Language Policy, a proposed international conference on second-language acquisition policies; and Asia-Pacific Studies Database, an international computer database providing teachers with on-line information for frequently taught topics. Participants at the PCC Workshop held in Melbourne, Australia in May 1992 enthusiastically supported the idea of another project, that of collaborating on the development of materials on the history of regions in and around the Pacific.

During the past 15 years, the PCC has used different models for its collaborative projects (King, Mizoue, and Kennedy, 1988, pp. 4-6). In the Bays and Harbours and the Ocean Fishing projects, for example, curriculum teams worked together over an extended period of time to design and develop materials. In the Technology as well as the Tourism projects, institutions worked more independently and reported progress and results at PCC meetings. In the Pacific Children's Communication Project, one institution took primary responsibility to co-ordinate communications through letters, artwork, telephone contacts, and computer links among students from different countries. And in still another form of collaboration, the Developmental Approaches in Science and Health project trials disseminates and adapts hands-on curriculum materials in schools in various countries.

The history project discussed at the Melbourne Workshop includes proposals for three possible models of collaboration. **Model 1**, a comparative study of existing student materials used in various countries on the histories of countries other than their own. **Model 2**, involving a working team communicating regularly on progress and sharing work for mutual information and benefit, profiting from the stimulation of the common effort. Different participating institutions -- through the efforts of curriculum specialists and teachers -- would develop materials on different regions. Developers would design and develop materials for in-country use, following exchange and trial in different countries. Those who trial the materials would provide feedback to developers

for revisions. After revisions, the materials would be adapted and used by interested institutions. **Model 3**, a collaborative effort in which one institution would take primary responsibility in designing and developing curriculum materials. That institution would work with specialists in various countries -- historians, social studies and other curricular specialists, and teachers, acting as developers, readers and consultants. Teachers would also be invited to trial the materials in their classrooms.

The approach or discipline for this project, whatever the collaborative models chosen, will be historical. Why take the historical approach? Because history provides us with perspective and context, and deepens the understanding of issues facing the world today. Governments, economies, and societies that exist today are the result of past conditions, developments, and interactions among civilisations. Problems confronting the world today -- among them hunger, population explosion, global warming, and deforestation -- can be understood adequately only by knowing about what happened in the past.

Educators in the United States (to name but one country) -- such as the National Commission on Social Studies in the Schools and the Bradley Commission on History in the Schools -- have recognised the need for students to learn about the histories of people other than themselves and places other than their own. However, quality curriculum materials on regions in and around the Pacific are in short supply in the United States. Existing world history textbooks give minimal coverage to Asia and the Pacific. Furthermore, such books compress an abundance of factual information into dense prose that is difficult for students to comprehend. As a result, the textbooks fail to foster a real understanding of the economic, cultural, political, and social histories of the different peoples of the world. They tend, moreover, to have a Eurocentric bias.

At the Melbourne Workshop of the Pacific Circle Consortium, and in subsequent communications, those interested in furthering this project suggested that the proposed materials be developed for use by students 13 to 16 years old. The materials would be designed to provide students with knowledge of the political, economic, cultural, and social history and geography of the people being studied. These curriculum materials, however, would not survey the entire history of a region, exploring instead some important aspects of the region's history and culture. The materials would communicate this knowledge primarily through sources such as the following: 1) selected literature: first-person accounts, essays, short stories, excerpts from historical novels, folktales, and other high-interest readings; 2) primary documents: letters, journals, classics of the period, government documents; 3) audiotapes with musical selections of the historical periods and regions, and videotapes. The materials would emphasise issues relevant to students' lives, with hands-on classroom activities that engage student interest interwoven with the reading selections.

Because this history project is in its infancy, it is an opportune time for those interested to question, comment, and otherwise further its development. How do you see institutions in your country participating? Your involvement is welcomed.

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3.6 Intercultural Education: An Education in Representation

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Pacific Cultural Literacy (PCL) is a project of the Pacific Circle Consortium that is directed toward exploring the educational potential of what is an emerging Pacific community. The project, while promoting a greater global spirit for education, conceives of literacy education as developing communication skills and interests that allow students to participate more fully in the life of this region. The broader education goal is to increase awareness of interdependence and exchange that works within the diversity of the community, as well as across traditional borders. This theme of increasing interdependence points to the importance of teaching students about the interplay of cultures, histories, literatures, and geographies that make up the Pacific area. Pacific Cultural Literacy is concerned with forms of reading and writing that better prepare students to understand the challenges of living in a region marked by a process of decolonisation that is no less than a source of hope and learning for many. We are particularly concerned with preparing a curriculum that assists the schools in addressing the forms of racism arising at this historical juncture in response to this decolonisation process that includes reversals of population movement, as the empire comes home, as people seek opportunity and refugees seek sanctuary (Balibar and Wallerstein, 1991). The cultural makeup of urban centres in the developed nations is changing rapidly, and more broadly speaking there is a growing sense that traditional educational approaches to the Pacific, as well as to nation and culture, are in need of supplementing.

At this point, we have begun to develop specific PCL initiatives in the assessment of "Pacific awareness" among a sample of students from Consortium members and in international communication through electronic communication networks (e-mail). In a forum such as this conference, we are continuing to bring forward for discussion and refinement a number of the key ideas behind this conception of a PCL. This is an OECD-related project based on education systems in Canada, Japan, New Zealand, Australia and the United States, but it is equally concerned with broadening the basis of realising a greater Pacific community. The specific challenge here for what have been termed the "white colonies," is tempering the Eurocentric-nationalist focus of schooling with a new regard for the Pacific that does not treat other nations as exotic and monolithic cultures and recognises the degree to which those whom we would study have become us, that is, part of the nation we live in. There is an aspect to these countries of being both colonised and coloniser that again we have begun to examine in light of how the schooling is organised. Japan adds another element to this as it wrestles with what has been termed a form of "self-colonisation" that is felt in the tension between technological accomplishment and the historical traditions of the country (Najita, 1991). The PCL project has universal interests typically found in global education programmes, but is also driven by the specifics of this emerging region of the Pacific and a desire to create an educational environment that is especially responsive to its dynamics.

In an earlier paper on PCL, one of us attempted to set the project clearly apart from such educational initiatives as E.D. Hirsch's cultural literacy initiative (Willinsky, 1992). To summarise that argument briefly, it seemed terribly counter-productive to build curriculum, as Hirsch has proposed, around the concept of a singular national culture of shared experience, shared history and literature. Clearly, this assimilationist stance furthered an American ethnocentrism that perpetuates the marginalisation of students from other cultural backgrounds, giving lie to the diversity of cultural understandings that already exists within the American communities that might otherwise

act as an educational resource. This was a cultural literacy that continued to stress nation-building as the ideological function of schooling at the expense of larger notions of interdependence and globalism. Up to this point the primary alternatives have been twofold: multicultural and anti-racist programmes. Multicultural programmes tend to regard "other" cultures as distinct and uniform entities to be celebrated and learned about as a way of eradicating prejudice arising from individual ignorance. Anti-racist programmes tend to take issue with institutional forms of discrimination in employment, housing and other areas of society. Both programmes have come into recent criticism for their failure to move beyond replacing materials that are selectively prejudiced with another set that are equally selective in their positive images, that is, they are failing to provide an educational programme that addresses the whole question of how cultures are represented (Rattansi, 1992).

In this paper, we wish to look at the educational powers of this concept of **representation**. The concept, under the spell of postmodernism, is capable of sufficiently unsettling what we make of curriculum that it can help us move toward programmes that are better suited to an emerging Pacific community. The postmodern issue of representation contains within it a number of promising ideas for organising the curriculum in ways that develop students' critical literacy as well as forming the basis for a greater awareness of an emerging Pacific community.

Representation has to do with presenting something again, for a second time, or in another form, in order to stand in for the original. Representation is a form of copying, but copying always in a selective sense, always with some form of allegiance or fidelity to the original, always with some degree of transformation. The central educational importance of this relatively simple idea came home to us in working on a project with grade ten students in a Vancouver high school who were engaging in electronic communication across the Pacific. "E-Mail" is a relatively new medium, especially for students. It presents new challenges to those who use it as it seems to fall between the letter and the telephone, giving new users pause over questions they would otherwise take for granted in how to represent themselves. The representational issue that came up repeatedly for the students in the grade-ten class was the presentation of self. How do we represent ourselves to students and adults living in Japan, Australia, Singapore, Taiwan, and Hawaii? In a way that we had not given much thought to before, electronic mail presents the opportunity to choose what aspects of the self to present. The question of, for example, the student's gender, blurred by an unfamiliar name, proved to challenge the process of communication. Who am I? How do I present myself? What do others seem to need to know in order to feel comfortable communicating with me? What do I want to know of others?

This simple question -- who am I? -- leads to the larger issues of how we have learned to represent ourselves by difference, by gender, nation, race, religion. The postmodern theme of representation is to put the stress on the **re**-presentation, that one is always presenting what has already been presented, one is working within existing presentations of what it is to be one nationality or many, to be gendered. School programmes, especially in history, geography, literature classes, are working with a variety of representations that have a good deal to do with the sense we make of each other. The postmodern element that seems central to PCL is teaching the young to understand the process of representation, to be able to, in effect, read how people, events, places are represented, to question the old and the new, the colonial and the post-colonial, the traditional and the technological.

Elements of this critical process of reading representation have long been present in schools, with what has become a favourite example of ours, the geography lesson that looks at different map projections, different labelling and colourings, different orientations toward centre and margins, top and bottom, in the maps that are used in the school. What needs to be learned in

such instances is that any individual map relates to both the countryside it purports to represent and the history of maps. What is the **original** then, we might mischievously ask, that is being represented? The map must be understood as symbolising some aspect of the earth in the service of some human interest. That is, maps are drawn from the point of view of their makers. The European tradition of map-making carries within its own privileged perspective, its own sense of extending access and dominion. This is no small issue when it comes to considering the mapping of the Pacific, as it moves toward forms of post-colonial education and way from a not-so-distant age during which 80 per cent of the globe was mapped as falling under European rule. Through the development of PCL, we are, in a sense, searching for alternative projections that re-present the region in ways that are necessary for imagining the region in a post-colonial era. Fortunately for our schools, such map-making projects have begun to be undertaken at repositioning the Pacific (Gunn, 1990).

One of the primary issues in learning to read representations is to appreciate how they work in this double sense -- as a map represents both the mapped and the mapmaker, or as a novel represents the story that is told as well as the teller. This now seems to us to be a crucial educational principle for introducing an effective post-colonial perspective to education in the Pacific region. A decade ago, J.M. Renner pointed out that South Pacific nations were "unified by their desire to free themselves from educational imperialism" (1982, p.138). But he goes on to say that there is no easy point of disengagement for these nations, no real autonomy possible because support is still required and because interdependence is here to stay. It is not enough to simply assert a new superiority for the Pacific cultures that had previously been dismissed by imperialist education systems. We need to encourage students to understand how that earlier superiority was constructed at every point, developed with skill and craft, sustained with great effort and expense, by the imperial power in a way that is served in turn by the very study of geography, no less than history and literature, science and home economics. We need to appreciate how that imperial legacy persists on a number of fronts, taking new forms, which continue to be represented thoughtlessly in ways that schools in the Pacific cannot completely disengage themselves from. There is a need to realise how existing representations operate, fostering an appreciation of the care and science that go into the prevailing and powerful forms. We cannot take these representations lightly. Yet if this colonial legacy cannot be simply dismissed as obsolete, we need all the more to be educated in it, as a means of reading how it has come to represent the world. The aim of PCL is to create students of representation who can appreciate that we are constantly working in representations that are susceptible to critical readings, that ask who is being treated as the Other, who is privileged by this reading, who is left out? This constant questioning of how knowledge is represented is meant to enable students to participate with greater confidence and critical acumen in acts of representation.

But does focusing on representation cut us off from the truth of reality, the really true? How do we decide among representations? This is a serious concern; it is a question that is often heard around debates about postmodernism. Does what we are proposing as a postmodern PCL mean that if all presentations are representations, which ones have a claim to being true, to being worthwhile, to being right? Returning to the example of the map, one can begin to address the truth claims for a map by looking at the accuracy of fit, the consistency of scale. In that sense, one map can be regarded as superior to another, as more consistently achieving its stated standards for representing the lay of the land. Yet that, it is also true that any body of land can be represented "accurately" through different projections. At a second level, the map can also be judged on the clarity and coherence of its representation of a complex phenomenon, as information of one sort -- the sheer variety of landscape features -- is translated into a series of graphic symbols. A map can be a masterpiece in the artful organisation of information. But in both these cases -- with accuracy and clarity -- one can also ask after the representation of the map-maker's interests, of the point of

view that has come to be projected and symbolised. Here the question of superiority or truth does become relative -- the map is true, one might ask, to whose purpose? Here we can begin to ask about the many purposes that are served by maps.

Given the levels at which the truth of a map can be assessed, where does that leave the student, not only as a critical reader of maps, but at the point of becoming a map-maker, that is, at the point of engaging in their own acts of representation? Again, we need to stress that every act of representation has its purposes. The high school students in the electronic mail project have been telling us through their messages and in interviews, that they engage in a variety of representations as they continually re-present themselves to students and adults, to boys and girls, to those living in Canada and those in Japan. They understand that it does not work to simply type, "Hi, I'm a Canadian student who...". They realise that they are, even in the dimension of nationalism, often many things. They appreciate that they are growing up in Canada among many traditions and cultures, and that the habit of saying that **I am**...suddenly becomes a cause for pausing when you are typing to someone living far away. Who am I really? What is a Canadian, a Chinese-Canadian, a Taiwanese living in Canada? They are at least beginning to understand that they are working with what others understand by these terms of identification, drawing on the meanings of others, like an artist working from a fixed palette of colours to create a picture of who they are. How much of what we mean is dictated by existing meanings, common representations? We, as educators, are beginning to appreciate the delicate, tentative sense of self that our students are exploring through their writing.

When we ask the students to participate in this process of representation, not only of themselves but of what they have learned from others, the question of assessment will always be present. We might ask after what they have learned from those they have communicated with, or, as we did at one point, about the short story translated from Japanese which they read together (through electronic communication) with students in Kyoto. The questions are still the same as with the proverbial map example. There is the matter of the accuracy of fit, of first representing the event that is being described in a recognisable, consistent, coherent manner. But behind each of those matching decisions lies perhaps the more interesting aspects of how the experience of talking across cultures is represented, how is it symbolised in terms, for example, of who is the expert reader, what were the points of collaboration, what parts of the story were most interesting, how much is explained by reference to student's background? As teachers we might ask ourselves, is there a place in this exercise for students to compare representations as a way of highlighting differences and commonalities; can we read these representations as organised by a number of themes that highlight and obscure elements of what goes on when two students share what they think about a story.

It might still seem that we are raising the terrible spectre of an endless regress of representations. We are asking students to represent the already represented. Is there to be no presentation without re-presentation? When and where does the process end? From our perspective, never and nowhere. There is no Pacific outside of its representation, outside of this process of turning it into meaning. The Pacific must always be read and written again. The educational promise is that by this process, by this active contribution to the reading and writing of the area, we can contribute to what it means to live here, in a larger sense of opportunity and connection than it has before. But this promise is not without its worries. The resulting instability of knowledge that comes of tying it to endless acts of representation, each vulnerable to a critical reading, may well seem to undermine the security of the school system, the certainty and authority of knowledge, the disciplining of minds and bodies. In its place, we are asking educators to risk a rise in an agile and critical thinking that is capable of reading the world from a number of

perspectives, to assess it along a series of concerns with accurate, efficient, and nonetheless interested representations, to write it afresh.

Yet is this study of knowledge, this embracing of epistemology, a little advanced for most of the students in our schools? Can we ask them to attend to how ideas are represented, for this is to ask them to think philosophically about the status of knowledge as a carefully constructed artifact? To explore with a class how a particular story, or battle, or nation, has come to be represented in this book or that video is to ask after how knowledge has been created and given veracity. It would not take a very sophisticated study of a single aspect or event from the Pacific to realise that knowledge takes many different forms in this region, as if it were in flux, as if ideas, like borders, not only change but are vulnerable to competing interests. Knowledge is not static or finished for PCL. There are levels of truth for, say, both environmentalist and corporate declarations of what needs to be done in the Pacific, truths which require careful attention paid to their representation of the issues, the facts, the solutions. How we, as students and teachers, then decide is a matter, as always, of conscience.

A final element is shining the light of representation on the school curriculum in terms of the materials with which students come to work. The wall maps form one set of representations of the Pacific. We might also ask after the representations of the region found in the history textbooks and literature anthologies. We might ask how difference is represented, how **they** and **us** are constructed out of these differences. The students need to understand that the textbook is a form of representation that can accurately state the facts of a situation in ways that can still be questioned as to what it is making of the world. Again we would say that good teachers have always been doing this. With PCL we want to take hold of those excellent practices to further focus them around the theme of studying how people living in this region of the Pacific have been represented in our textbooks, but also in other more public media such as newspapers and video, as well as asking after how those representations have changed with each historical turn and struggle in this area. But we also need to work at re-presenting the Pacific, to call on the students to assist us in bringing to the classroom a much broader perspective on the Pacific through other forms of literature, art, history, geography, to bring forward the missing elements, the voices of women, the dispossessed. The classroom can only be a richer, more engaging place for it.

The Pacific area is going through a process of reorientation, redefinition, of which representation is but one aspect. While the region remains full of promise, there still persist extreme disparities between wealth and poverty, xenophobic fears and racial assignations, military conflicts and resistance movements, environmental abuse and economic exploitation. Representation is by no means the sole cause, the only issue, behind either what troubles or encourages us in the development of this area of the world. But representation does seem to be at play in every level of this experience, as we come to know this area better, and as we can begin to make our schools far more receptive to the changing dynamics of this region. From an educational point of view, it is important for developing and developed nations to realise that the representations of colonialism have already been challenged on a large scale, and not only across the Pacific, in ways that the schools are challenged to match in terms of curriculum and instruction. On the local scale of the classroom in Vancouver, Kyoto, and Singapore, this process can be emulated in highly educational activities that allow the young to understand how others have worked the world in acts of endless representation and self-representation. It now rests with the Pacific Circle Consortium to continue developing aspects of a curriculum that is self-consciously concerned with the representation of life in and around the Pacific region as a historical process of development.

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Internationalism

The group feels that there should be greater efforts by school systems to add an **international flavour** to their school curriculum and educational programmes, such as:

i) possible inclusion of major international languages as electives in the school curriculum; also subjects like World History and World Geography;

ii) school systems should be encouraged to develop twinning programmes -- or sister schools in other countries, to be followed by student exchange programmes;

iii) attempts should be made to increase global "communication" such as through promoting student curricular activities at the international level using conventional media and modern electronic media like teleconferencing;

iv) work on education projects of common concern and interest like environment health issues: AIDS and numeracy;

v) encourage more comparative studies and analyses of educational programmes developed in each nation for mutual benefit.

Multiculturalism

Another project considered by the group is in the area of **multiculturalism** aimed at reducing ethnocentricism in school programmes with the objective of promoting cultural understanding, mutual respect, appreciation and tolerance.

Educational programmes should be designed to help students develop not only a national outlook but also a **world** and **global outlook.** We are not to learn from each other for competitive purposes by promoting neoracism or neoethnicism, not that one should envy other social groups, but instead learn to appreciate each other's cultures with the objective of attaining harmonious living in one "global village".

Multicultural education so developed should transcend national boundaries. Moral and values education have a role to play in shaping right attitudes.

Attempts should be made through educational programmes to improve "communication" between peoples of different cultures, nationalities, in short to improve human communicative ability and skills.

Curriculum and Pedagogy

i) Group interest was also focused on issues pertaining to variability of sub-groups' performance and academic achievement in Mathematics and Sciences in many DAE

countries. Chinese and Korean pupils seem to perform better in Maths/Sciences. A possible explanation given was that Chinese Asians tend to do better because of the Confucian Ethic to strive for academic and scholastic excellence, hence their children are more diligent.

ii) The group also feels that Teacher Education Programmes (Pre-service and In-service) should be oriented to provide basic competencies in classroom instruction.

Competencies in teaching mixed ability groups are essential in the case of Hong Kong and many countries.

On Teaching-Learning Styles, the group noted that rote learning, fact memorisation, cramming of information, is still prevalent in the context of very examination-oriented educational systems such as those in Korea, Hong Kong and Malaysia.

The group also focused on the OECD Teacher Quality Project and the current work being done at school level case-studies, teacher seminars and the cross-national review of teacher education programmes. Such projects to enhance teacher competencies are well supported by group members, who expressed interest in being involved.

Vocational-Technical Education

Many Asian countries are embarking on large-scale plans to provide more vocational-technical education especially in anticipation of fast growing economies. Evidence presented is not so rosy for the following reasons:

i) there is still a gap between skills taught at vocational schools and the actual skills required by the industries;

ii) industries prefer to train their own skilled workers on the job, because they are more suited to the particular skills required by the industries;

iii) fast obsolescence of skills taught at vocational schools.

As industries or economies expand rapidly, more and more school leavers are able to find white-collar jobs; that leads to a general dislike of menial, blue-collar jobs attached to vocational education. Hence vocational education is stigmatised. Japan now seems to prefer a more general education programme. Early streaming into vocational schools is counter-productive in a rapidly developing economy.

Public versus Private Education

Following the issues raised by lead speakers, the group also discussed the issues on relative effectiveness of Public and Private Education enterprises in providing quality education. Japan and Korean studies seem to be rather **inconclusive.** There is a need to pursue research and studies on the relative **educational outcomes** of schooling in the public and private educational institutions in the Asia-Pacific region as well as the cost-effectiveness studies on the delivery system.

Follow-up Activity

In conclusion we felt this conference was very useful and would like to see the dialogue continue, focused on more specific interests so that we may improve our national systems by introducing a global and international perspective.

The group strongly felt that this conference should work out a follow-up structure and activities for further dialogues but should focus on a more selective theme or issues of immediate concern and benefit to Member countries, aiming also to produce more concrete tangible and measurable results of ideas suggested at the working sessions. Various options were discussed briefly on the possibility of DAEs joining the PCC or the Asian DAEs could form their own consortium and, in close association with the PCC and CERI, could work on common projects.

Report of Working Group IB: Primary and Secondary Education

The discussion focused on three areas: 1) curriculum of quality and relevance; 2) teachers and schools (quality and effectiveness); and 3) organisational and structural responses (expansion and diversification of secondary education).

Working group participants discussed the situations in their own respective countries in those three areas. What these discussions revealed were many areas of commonalities and areas of differences. Each of the three areas will be discussed in turn.

Curriculum of Quality and Relevance: Responses to Changes and Challenges

A number of countries have experienced or are planning curriculum changes in their primary and secondary schools. These curriculum changes are responses to remarkably similar conditions: a changing economic climate (either improving or declining); a need to respond to the multicultural nature of society; and a need to respond to emerging social concerns. Curriculum changes were not necessarily responses to all these conditions. In some countries, only one or two of these conditions were present. These changes also reflect various responses to determine the extent to which the needs of individual children can be met while also meeting the needs of the wider society. Further, these changes reflect the tension between preserving national traditions and educational systems and increasing pressures for wider "global" systems.

While the motivating forces for curriculum change are similar in many countries, the responses of individual countries differ. Some countries have moved away from a subject view of the curriculum towards a more integrated curriculum approach. Malaysia and New Zealand are examples of this movement. On the other hand, the United States curriculum reform efforts place more emphasis on subject area instruction.

A few countries (Canada and Malaysia) report a movement away from a teacher-centred towards a student-centred approach. However, other countries, notably Asian countries (Thailand, Korea, Japan), report a curriculum that is driven by the national university entrance examinations. In these countries, efforts to reform the curriculum are difficult unless these efforts can be linked to achievement on these national examinations.

Increasing emphasis on assessment, especially on criterion-referenced assessment instead of norm-referenced, was noted in several western countries (New Zealand, USA, and European countries). New Zealand and Malaysia also both report an emphasis on values education in the school curriculum. Increasing pressure towards "homogenising" the educational systems of the European countries was also noted.

Teachers and Schools: Quality and Effectiveness

The status of teachers varies among countries. Teacher salaries appear to be a reflection of and a crucial factor in determining the status of teachers. In countries where teacher salaries, as compared to the rest of the country, are relatively low as in Europe, the United States, and Thailand, the status of teachers is low. In countries such as Japan and Canada where teachers'

salaries are relatively high, teacher status is also high as is interest in entering the teaching profession.

In many Asian countries teacher training programmes, especially at the primary level, are the responsibilities of ministries of education not universities. Ministry control of teacher training programmes was perceived to allow for faster responses to the country's need for teachers; faster than would be possible through traditional university decision-making systems. In some countries, ministries provide the teacher training programme for primary teachers, while universities (or colleges of education within universities) provide training for secondary teachers. A rapid increase in the demand for secondary teachers in Malaysia, which the universities have been unable to handle, is resulting in the Ministry's providing both its traditional primary teacher training programme and a new secondary programme. On the other hand, Hong Kong is moving towards removing teacher training institutions from the government.

Basic teacher training requirements vary greatly, especially for primary teachers, ranging from the completion of only secondary school education to completion of four- or five-year university programmes. While most countries provide in-service programmes for teachers, these programmes also vary. Japan offers an extensive system of teacher in-service education with required programmes for first year teachers and teachers who have completed five years of teaching. Hong Kong is introducing an advanced teacher certification programme, a two-year in-service programme for teachers. Teacher promotion in Hong Kong is tied to completing in-service courses. However, in many other countries, teacher advancement is linked only to seniority thus reducing the incentive to attend in-service programmes. A central problem in teacher in-service was a concern over teacher burnout and the need for retraining of senior teachers.

Organisational and Structural Responses: Expansion and Diversification of Secondary Education

Enrolment in secondary education is expanding not only because of general population growth but also because larger proportions of the population are attending school especially at the senior secondary level. This increasing enrolment creates a major dilemma for the schools: how can schools raise the standard of performance for all students in spite of wide differences in preparation and ability levels? Clearly procedures that succeeded in the past with a more selective group of students are inadequate for success in the future. The question arises: are vocational education programmes becoming the predominant method of dealing with increasing enrolment at the secondary level?

Expansion of vocational education programmes in many European countries result from national policies which are responding to social demands of working class parents. Working class parents favour vocational education programmes as being less alienating for their children and their future work environment. In some countries such as France, all growth in enrolment at the secondary level is going into vocational education programmes.

Some Asian countries (Hong Kong, Japan) however, report that students are reluctant to go into vocational training programmes. Academic programmes at the secondary level have higher status, and a clearer link to the labour market, and are thus desired.

Thailand's policy to increase secondary school enrolment conflicts with the needs of families especially in rural areas. Attempts have been made to create or tailor vocational education programmes to meet the needs of this segment of the population. Thailand's previous experience

with vocational education in the 1970s was largely unsuccessful because of widespread unemployment among vocational education graduates.

Expanding enrolment was not the only factor in providing vocational training at the secondary level in Korea. Because only 50 per cent of the graduates from Korea's academic high schools get into Korean universities, vocational courses were introduced into the secondary programme to assist with the transition to work.

A common concern raised about vocational education programmes was the need for a vocational curriculum which develops a broad range of skills instead of a narrowly focused link to a specific industry.

Topics/Areas for Future Co-operation

- Promotion of student exchanges between countries.

- Many issues have been discussed during this conference regarding curriculum reforms, teacher preparation, enhancing the quality of education, etc. Continuing the dialogue on specific issues would be beneficial. Forums/seminars focusing on specific topics would allow for a valuable exchange of information and examination of a wide range of policy or research options and issues.

- There is also a need for a forum to discuss specific situations in the dynamic economies. However, participants were uncertain as to the most appropriate vehicle for this interchange.

The group agreed to discuss not only to "Higher Education", but also various types of institutions at the post-secondary level, for it was felt that in order to adequately discuss the issues in the region/country it is essential to encompass the whole spectrum of institutions as a system. The discussion followed the order of the three main topics suggested by the secretariat's Annotated Agenda, i.e. 1) Quality/Relevancy in higher education; 2) Financing and Management; and 3) Internationalisation. Major points are summarised below. The rapporteur took the liberty of not following the sequences of discussion exactly.

Quality and Relevancy

Various points and arguments raised by the participants may be summarised into three sub-themes:

i) Rising concern about quality and relevance

Many participants pointed out that there is growing social concern about the quality and relevance of what is taught in higher education institutions. The general public no longer taken the authority of higher education institutions for granted. One indication is a special issue of a very popular weekly magazine in Canada, which gave evaluation of higher education institutions and ranked them. The issue sold very well. Similar phenomena were observed in Japan. Governments are also becoming more keen about quality of education and research in higher education institutions. The interest arises on the one hand from the growing consciousness of the public about how the tax money they paid is used, and on the other hand from the strategic needs to counter international competition.

ii) Dimensions of quality and relevance

Various dimensions of quality and relevance were touched upon. Foremost concern was raised about the quality of teaching by a number of participants. Faculty members tend to devote their time to research rather than to teaching. One related issue particular for DAEs and some other Asian countries is the disparity between public and private institutions with respect to quality. At least some private institutions in those countries are poor in instructional quality. The relevance of what is taught is another issue. A survey was conducted in England that showed that, even though training in Humanities and Social Sciences may potentially create the ability to deal with vagueness and change in the working life, teachers tend to teach as if all the graduates were heading towards a Master's or Ph.D. degree.

Research in higher education institutions is also facing serious problems. In Japan, national universities are suffering from low budgets, while business enterprises invest huge resources in research generally and increasingly in basic research.

One of the acute policy issues in Korea is upgrading of graduate education. In Japan, innovations in graduate level education is currently a significant issue.

iii) Measures to improve quality and relevance

A few comments were made concerning present attempts and past experience in improving quality and relevance. In the State of Oregon, in the United States, teacher education is moving to the graduate level. In Taiwan and in Korea, the national government is providing subsidies to private universities to help improve their quality of education. There was a belief that teachers in higher education institutions should be required to have some course in teaching skills.

Financing

i) Budget shortfalls, cutbacks and their backgrounds

Some of the countries have been experiencing serious deterioration in funding of higher education institutions. In the State of Oregon, US, revenue sources for higher education are shrinking partly because of the economic recession and partly because of tax payers' revolt against spending on higher education. As a result, the State budget on higher education has declined, and the university has received an across-the-board cut of 20 per cent. A similar situation can be found in California and in other States. Serious cutbacks in the higher education budget and reorganisation of higher education institutions were also experienced in British Columbia, Canada, and in Australia. Japanese national institutions have experienced virtual reductions in government funding that have remained at the same level for a decade despite inflation.

In some other areas in the Asia-Pacific region, particularly the DAEs, the funding for higher education has been expanding rapidly because of the steady economic growth. In Taiwan, the government is now expanding the public sector of higher education by establishing new national universities. Singapore, where higher education institutions are all national, is investing to expand polytechnics. In Hong Kong, investments are made to upgrade polytechnics. Nonetheless, the demand for additional resources are naturally increasing given that the popular demands for higher education is increasing at the same time. Also the needs to raise quality implies additional funds. In Korea, rising needs of upgrading graduate courses would also require additional funds.

From these perspectives, it appears that, even though the financing issue is important in all of the regions/countries, the nature of the issue varies. In a group of countries, it is the issue of reducing the past level of government expenditure. In other countries, the issue arises from the gap between the government funding and the needs of additional funds, while both are growing at the same time.

ii) Responses

Means are sought in all the countries, in response to financial stringency.

One way is to expand the private sector of higher education. This is the way already taken in Thailand, Korea, Taiwan and Japan. Singapore and Hong Kong, however, do not have private institutions. In Australia, where higher education had been entirely public, a private institution was established a few years ago, but it is not growing as expected.

A second means is to raise contributions from the students. In the State of Oregon, US, tuition fees have been raised by 40 per cent. Some other States are taking similar steps. Australia used to charge no tuition fees in higher education institutions, reflecting the general welfare-state policies. But, the country introduced a few years ago a "Higher Education Contribution Scheme"

(HECS), whereby students pay a part of the cost after graduation. In Japan, the tuition level in national institutions has been constantly raised in the last decade. Consequently, it is now approaching the levels of some private institutions.

A third means is diversification of the source. In British Columbia, Canada, a "matching" scheme was introduced. The government provides a fund contingent upon funds from outside sources including business and foundations. In Japan, national universities are receiving a growing amount of research subsidies from business enterprises. In conjunction, it was pointed out outside funds are not only useful as an additional source, but also help to close the gap between the university and society.

A more radical means is to restructure the higher education system itself. In the United States, financial cut-back is forcing some States to abolish selected departments, divisions, and sometimes a whole institution. In Australia, such institutions as Colleges of Advanced Education were amalgamated as a part of the abolition of the binary system. Its economic outcome, however, is not clear. At least in the short run, amalgamation incurs even more costs rather than saving them.

Another direction of restructuring is expansion of higher education institutions that require shorter periods of study than the full university. OECD has used the term "Alternatives to Universities". In Singapore, polytechnics are being developed vigorously. However, it is not clear that those institutions are in fact less costly. In Taiwan junior colleges are unpopular among students for their preference is strongly inclined towards traditional universities. In Japan, a new "Degree Granting Board" has been established. One of its functions is to open a way for junior college graduates to be admitted at the third year of four-year institutions. In British Columbia, networks that link a university and junior colleges have been set up.

iii) Accountability, evaluation and management

One topic raised repeatedly by a number of participants was the growing scepticism of the general public about the internal functioning of higher education institutions. In the United States, a substantial proportion of the public consider the academics to be over-paid while working only a limited time. The rising social attention reflects to some extent the lack of confidence in the efficiency of higher education institutions.

How are we to persuade the public about the benefits of spending on higher education? There appeared no immediate answer to that question. In Japan, conscious efforts were made by the Association of National Universities and Colleges to appeal to the public through publicising the meagre conditions currently suffered by the institutions. Recently, OECD has initiated a project that shows in economic terms that expenditure on higher education is in fact a good investment for social and economic development. Essentially what is needed on the part of higher education institutions is establishment of accountability.

One important means to assure accountability is evaluation. In general, many countries have experienced growing interest in evaluation and the participants shared various experiences in this respect. In Australia, a system of outcome indicators was developed. The results were controversial, and they have not been widely publicised. In Korea and Taiwan recently, evaluation of higher education institutions was instigated by government. In Korea, a few engineering faculties were selected and given evaluation based upon the data that those faculties provided. The results were summarised in a sheet where the institution was given grades with respect to a number of selected items. That scheme, however, created serious controversy among evaluated faculties.

Similar experiments took place in Taiwan and faced similar difficulties. Direct objective evaluation by a third party appears to entail serious problems.

It was no wonder, therefore, that many participants in the working group felt the need to be careful in introducing third-party evaluation. Many participants also stated their concern on the possibility of infringing upon academic freedom. At the same time, however, it was also pointed out that new developments in higher education are creating the need for such evaluation. Increasingly, adult learners are entering higher education institutions while higher education institutions are becoming heterogeneous. In order to assure access and mobility of students in such circumstances, it is necessary to have objective evaluations of institutions and programmes. Also, if the government subsidises private institutions, the amount should be linked to results from some form of evaluation.

Self-evaluation by the institution itself is now set to be the most important issue in Japan. In 1991, revisions were made on Chartering Standards to include a clause that urges higher education institutions to undertake self-evaluation on a regular basis. Even though the clause does not include any incentive or punishment, many universities and colleges are now setting up internal organisation for that purpose. It was pointed out, however, that even self-evaluation entails significant problems. One is the lack of motivation among individual faculty members. If an institution lacks basic infrastructure, then evaluation will not solve many problems.

It was also pointed out that evaluation is most difficult with respect to the process. Yet, it is exactly the area where evaluation is most necessary. In this respect, it is important to link evaluation with effective management.

Internationalisation

The discussion of the above two classes of issues took most of the time, which left only a limited time for the issue of internationalisation.

One participant raised the need for international standards, or a systematic list of academic degrees evaluated with respect to transferability. It was also pointed out that some countries do not recognise academic degrees from some other countries.

On the other hand, some participants were sceptical about the feasibility of creating such a system. Also, the transferability issue is probably related to more political problems, and demands cautious approaches. It was also pointed out that UNESCO has already attempted this task.

Future Directions of International Co-operation

At the end of the discussion, consideration was given to possible roles and directions of such international meetings as the present one.

There was a negative opinion among some DAE participants. According to that opinion, the present meeting did not succeed in finding solutions to the issues which countries are facing now. Moreover, it is not clear at all that OECD would contribute to the development of education in tangible ways.

On the other hand, there were arguments that an informal dialogue among the societies of Asia and the OECD could be valuable. Even though it is clear that such meetings will not provide direct answers to the impinging problems, awareness of similarities and differences in other societies in the region should help policy makers and experts consider their own problems in a wide framework. From that perspective, the present meeting was just an initiation of a long-term effort to exchange views among the countries represented and others. In the future the scope of discussion in each meeting should be more specific and the benefits would become more tangible.

The principal issues our working group addressed were:

① manpower planning;

② diversification of sources of funding;

③ internationalisation of education.

The focus was on universities and colleges rather than the whole spectrum of post-secondary education and training.

Manpower Planning

The issue was discussed in terms of the apparent gap between the hopes which are often attached to manpower planning and the outcomes in practice. A number of papers had drawn attention to the importance of addressing the mismatches between demand for highly educated and skilled labour and the supply of graduates from higher education. So far as disciplines were concerned, common examples were oversupply of teachers and liberal arts graduates and shortages of engineers and scientists. However, some countries were also confronting the issue of the appropriate balance between the numbers participating in education and training in universities, as compared with those in other post-secondary institutions involved in technical and vocational education and training.

Reference was made to current or potential oversupply of university graduates combined with continuing high levels of aspiration among students and their parents for access to university education. Given these factors and the high cost of higher education, the interest in manpower planning was obvious. While acknowledging manpower planning can take many forms and attempt varying degrees of specificity, no one in the group was able to point to any successes for it in practice, at least not in a comprehensive way. It was thought that some form of manpower planning might be most likely to succeed where countries with a low skill base pursue clear development plans, but once again no one in the group was able to point to actual examples of much success. This is an area which might benefit from closer attention and exchange of expertise and experience.

Diversification of Funding Sources

- This was a subject which all seemed to see as relevant to their national circumstances. The discussion made it apparent, however, that while at a certain level of abstraction there was significant common ground, on a more practical level there were significant differences.

- There seemed to be a good deal of commonality in the nature of the pressures to look to diversification of funding sources, particularly (though not exclusively), non-government sources. These pressures included:

- -- high levels of student demand for higher education places;
- -- in most countries, a policy of raising participation levels to address economic and social needs;
- -- it seemed mass higher education is either here or well on the way in all or most countries present;
- -- pressures on the public purse;
- -- a concern to ensure equality in higher education and a concern that the cost of expansion of places has, or might in future, put this quality at risk;
- -- recognition that there is clearly a public benefit in higher education and a tangible private benefit to students and to industry;
- -- some sharings of costs between them has been seen as appropriate and the balance in their contribution towards these costs is shifting in many countries.

One trend is towards a greater contribution from students through the introduction, raising or deregulation of tuition fees and a stronger effort on the part of universities, with encouragement from government, to seek additional funding from industry. So far as fees are concerned a number of countries have either introduced loan schemes or are considering their introduction to assist talented individuals from disadvantaged backgrounds to gain access to higher education.

- o Another trend, apparent in at least two countries with a strong system of private institutions, is towards measures to achieve greater "fairness" as between public and private institutions through government subsidies for the latter. These subsidies are directed towards ensuring a quality higher education can be provided at a fair price to students, having regard to the cost of places in public institutions. Thereby, it would seem recognition is being given to the public benefit in private education.

- o There is also a trend, taking many forms in different countries, towards the deregulation and decentralisation of funding and administration. This trend reflects the view in at least some countries that the pricing mechanism can achieve greater efficiency and effectiveness and that greater flexibility and scope to respond quickly to local needs and examinations is important for similar reasons.

Internationalisation of Higher Education

Several key features of internationalisation were identified and, it was agreed, each raised a variety of issues. Some features related to the content of education, others to process and structures. Among those features were the following:

- o There are increasing flows of students between countries at both undergraduate and postgraduate level:
  - · some undertake a whole degree overseas, others a semester or two;

- some flows resulted from aid programmes, some from systematic exchange and mobility programmes, and some simply from decisions by individuals.

- Institutions increasingly want to ensure they meet international standards of quality in teaching and research, out of a desire to serve their own local or national communities well, but also, in many cases, because they are increasingly competing internationally to attract students, staff and research funding.

- Co-operative approaches to research are being pursued through staff and postgraduate student exchanges and collaborative research projects reflecting a trend towards globalisation of research funding, particularly from the private sector, and recognition of the growing international dimension of many fields of research themselves. Efforts are also being made to increase staff mobility in the region and between regions for teaching as well as research purposes.

- Teaching is being delivered to overseas students, for at least part of an undergraduate course in their countries.

- Efforts are being directed towards internationalising the higher education curriculum, particularly teacher education, given the importance attached to the international dimension in school curricula.

It was recognised that activity is already going on at many levels, even if not always on a large scale. Much of the activity simply represents individuals acting on their own initiative, but also there are bilateral agreements between institutions, bilateral agreements between national umbrella bodies such as Vice-Chancellors' or Presidents' Committees, bilateral and multilateral agreements between governments to facilitate activity either by releasing or tightening the regulatory framework. The group identified a number of barriers to increasing internationalisation, particularly as regards student mobility. These included:

- Problems of credit transfer and recognition of degrees and other awards.

- Fears on the part of some countries about a brain-drain.

- Concerns in some local communities about places going to overseas students when local students cannot gain places.

- Difficulties sometimes experienced by researchers wishing to conduct field work overseas.

- Mention was also made of potential limitations to the benefits gained from inadequate planning of the experience as regards advance preparation for the student and study support whilst overseas.

These areas were identified as warranting attention and on which international co-operation might be useful:

- identification of the barriers to internationalisation as a basis for future policy development;

- identification of problems associated with credit transfer and award recognition and development of proposals for addressing them; and

- study of what constitutes a satisfying educational experience for an overseas student.

Finally, while there are clearly activities directed towards enhancement of the research capacity of the region, these activities have not been developed on a scale or a level of organisation commensurate with such activities elsewhere, notably in Europe. This suggests itself as another area warranting attention.

5. OVERVIEW OF ISSUES AND THEMES IN PRESENTATIONS OF DISCUSSION

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What follows is an account of a path-clearing conference. It was a first for CERI and Japan, its joint organisers. It was also the first time that experts from Hong Kong, Korea, Malaysia, Singapore, Taiwan, and Thailand had come together to discuss matters relating to educational development among themselves, as well as with people from Japan and other OECD countries.

The meeting marked a further step in an informal dialogue which since 1989 has been identifying matters of common interest between the OECD countries and the six most advanced of the developing Asian economies. The first consultations focused on economic affairs, investment and international trade. It is the dynamism of these Asian economies that has attracted OECD's attention, in whose parlance they are referred to collectively as the Dynamic Asian Economies (DAEs). The aim of the Hiroshima Conference was to find out whether, in the opinion of those taking part, the leading issues of educational policy in Hong Kong, Korea, Malaysia, Singapore, Taiwan, and Thailand have a character that gives them a growing community of interest with the OECD countries and perhaps a basis for further reflection and consultation and the exchange of experience.

The fact that this Conference is the first initiative to broaden the dialogue has taken place in education is itself worth noting. National policies for education are central to the two policy concepts that are encapsulated by the acronym OECD: economic co-operation and economic development. Education and training fashion the human capital that is indispensable to dynamic industrial and post-industrial economies. And the OECD objective of co-operation is a commitment, as Malcolm Skilbeck noted in his opening remarks, "that through international co-operation no one need lose; all may gain". The question in the forefront of everyone's mind was whether the sort of co-operation expressed through the work of the OECD in education is something to which the DAEs could usefully contribute and from which they and OECD Member countries could expect to gain.

National Policies, International Co-operation

International co-operation in education is itself an expression of a paradox. This was brought out by Mr. Odd Eiken in his keynote address in the opening session of the conference. "There is no political area that is quite as national as the schools and educational system of a country", he said. "But, at the same time", he continued, "it is no exaggeration to say that there are few areas undergoing such rapid internationalisation as education". These features were amply confirmed in the reviews of educational policy development in the six East Asian economies. The fact, too, that the developments reported on have all taken place during a period of less than 40 years emphasised both the distinctive nature of each system's policy answers and the common problems all are grappling with. Education systems which in most OECD countries have evolved in the course of a century or more have been created in the DAEs during the lifetime of the people

who interpreted them for the conference. This has had the effect of pointing up structural similarities in their development. Of all six, for example, it can be said, as Professor Rahimah Haji Ahmad said of Malaysia, that educational policy has always been encapsulated within economic and development policies. In all six, however, that encapsulation is expressing itself through policies of national identity and aspiration that are unique to each one. Singapore and Malaysia have both defined themselves in relation to a common legacy of British colonial policy, but the educational systems they have created, each in the service of a different national vision, make them very different systems on important points of detailed comparison. Until recently, too, education has been much more of an engine for rational economic development in Singapore, Malaysia, and Korea than in the other countries. Thailand with its large rural population has social and economic concerns that the other countries do not have to anything like the same extent. Hong Kong and Taiwan are developing their education systems in international contexts very different from the others, with their acknowledged national autonomy.

Cutting across these differences, however, are a number of concerns that the DAEs have in common. Speaking for Thailand, Dr. Chalongphob Sussangkarn noted that "there is an accumulating and interrelated set of problems which affects and will affect Thai development, equity, social values and social structure". Though it was sometimes expressed in different ways, much the same was said for the other countries as well. For all of them the contribution of education to the formation of human capital is a central policy issue, the relationship between formal education and national (and local) skills markets is highly problematic, and there is much uncertainty about the best way of organising secondary education for the greatly increased percentage of the age groups now receiving it in some form. The demands of rapid expansion raise questions of access, equity, the nature of the curriculum, the quality of teaching, and standards of attainment. Intense competition for secondary and university places is perpetuating narrow curricula and teaching methods that rely on rote learning and memorisation, and the question is how to change the internal culture of schools and universities to emphasise the creative, problem-solving approaches essential to the effective performance of modern industrial and post-industrial economies. The move from elite to mass forms of education raises difficult questions about the status of the teaching profession and the role of teachers in the moral formation of children and young people. It also raises questions about the role of private providers of education and vocational training and how far the State should encourage them through financial subsidies or regulate their activities. And in systems that all have strong traditions of centrally controlled, hierarchically organised systems of education, questions are being raised about the wisdom of devolved responsibility (and moves in some countries in that direction).

These are fundamental issues of educational policy that have long been familiar to the OECD countries. Through the work of its Education Committee and CERI, the OECD has drawn on the knowledge and experience of people in its Member countries, and has initiated processes of review, reflection and innovation that have made significant contributions to the way a growing number of educational issues are conceptualised and approached in its Member countries. The underlying questions for the Hiroshima Conference were whether the similarities of the issues as they were described for the DAEs were real or merely apparent. Does it seem that the substantive issues they are now facing have enough features that educational policy makers in the OECD countries will recognise as being real for them as well? Does it seem that their further consideration would be mutually beneficial to people on both sides of a continuing dialogue?

The Conference as a Conference

Because it was a first step the conference was a venture into the unknown. The first thing to be said about it, therefore, is that it took place against a background of thorough planning and preparation by OECD and Hiroshima University. The annotated agenda, the result of considerable prior consultation, gave a clear conspectus of the policy issues to be addressed in the conference. The background papers provided expert commentaries for each country. The conference venue was excellent for our purposes. And the warmth, thoughtfulness and unobtrusive efficiency of Professor Mizoue and his colleagues from Hirsohima University could not have been bettered (and, in my experience of international conferences has seldom been equalled). The second thing to be said is that all six DAEs accepted the invitation to take part in the conference. That in itself signified a predisposition to believe that the purposes of the conference envisaged by OECD might be of some benefit to them.

But the conference had another strand as well. The theme of the conference was educational co-operation in the Asia-Pacific region and, as one of its initiatives, CERI has since 1977 been associated with an important programme of educational co-operation in the five Asia-Pacific countries of OECD -- the Pacific Circle Consortium (PCC). The PCC, as several participants explained, is a voluntary self-managing activity under which educationists from a variety of institutions, some of which are government departments, in Australia, Canada, Japan, New Zealand and the United States undertake co-operative programmes of curriculum and professional development. The PCC manages itself through an annual meeting which in 1992 was planned to take place in Hiroshima. Because of its association with OECD through CERI, and because it is itself an expression of the kind of co-operation that OECD seeks to foster among Member countries, the decision was taken to conduct the PCC annual meeting and the OECD/DAEs meetings back to back and invite the PCC representatives to be part of the OECD/DAEs conference. Hiroshima University, as the host institution and the Japanese university designated to promote educational co-operation with Asian and Pacific countries, also invited some of its graduate students to attend the conference as observers so that they could enlarge their knowledge of the international implications of the issues set down for discussion.

Altogether 71 men and women took part in the conference, made up as follows: 18 were from Hong Kong, Malaysia, Republic of Korea, Singapore, Taiwan, or Thailand; 11 were from CERI Member countries and two from its Secretariat; 20 were members of the Pacific Circle Consortium; and 21 were educationists and policy advisers from Japan.

It was thus a diverse as well as a widely representative conference. Everyone came with expert knowledge of various aspects of his or her own national system. In addition, the CERI representatives had a shared knowledge of OECD/CERI co-operative activities in education. Those from the DAEs, however, were meeting for the first time in an international conference whose aim was to explore possibilities for international co-operation with OECD Member countries. There was much for them to learn about each other's systems as well as about the OECD, how its Member countries work together, and what that might mean for their own countries. The PCC members reflected a different community of interest again. Though part of a CERI activity, their specialised work was not, before the conference, well known to all the CERI representatives at the conference or to many of the Japanese educationists. It was entirely new to those attending the conference from the other Asian countries, who were understandably far from clear about how PCC related to CERI, and whether it was a necessary relationship.

Given that the conference was to last only three days, and that it had an ambitious, wide-ranging agenda, there was a real risk that the differences of background among its members would

prove to be too great to produce the meeting of minds necessary for effective dialogue. Necessarily, there was a great deal of information to be shared. So the question was whether discussion would succeed in going beyond narratives of facts to evaluations of national policies and developments in comparative contexts of one sort or another. The structure of the conference provided the possibility of doing so. The first day was held in plenary and was given over to the presentation of views from the OECD and from the DAEs. The second day was organised in four discussion groups, two taking issues in primary and secondary, the other two in higher education. The third day was taken in plenary to receive and comment on reports from the discussion groups, summary comments from selected people, and to hear the general rapporteur's summing-up and closing remarks from the conference chairman and the conference president.

What was implicit in its structure became manifest as the conference proceeded. The key was of course the calibre of those taking part. The breadth of knowledge and experience represented among the 71 participants was impressive. Because, too, those taking part had been invited in their personal capacities, and were speaking for themselves rather than as government representatives, the conference quickly took on a recognisable CERI character. As well as being well informed, interventions were open and frank and offered in the spirit of sharing experience so that others might benefit by reflecting on it.

The lead papers and the group discussions focused on matters that the DAEs had in common rather than on the features of the systems that make them different from each other and from OECD countries. Inevitably, too, all members of the conference found themselves compressing very large generalisations about their national systems into a sentence, sometimes even a phrase. Discussion could not avoid levels of abstraction that screen out the hesitations, reservations, and contrary experience that are part of the reality of any education system. Not surprisingly, therefore, the conference was reminded in its final session that silence was not always to be construed as acceptance by everyone on all that had been said. Some potentially contentious notions -- globalisation and internationalisation were cited as examples -- needed much more teasing out before some members of the conference would have felt that they knew what they might imply for their national systems.

Two other matters arising from the unexamined use of language should also be mentioned. The acronym "DAEs" is a part of the OECD vocabulary that may not as yet be readily perceived as a label of self-recognition by nationals of the countries to which it is intended to apply. There was some mystification on the part of some of the representatives from Hong Kong, Malaysia, Republic of Korea, Singapore, Taiwan, and Thailand as to why they were described as DAEs and, if they were deemed to be DAEs, why some other Asian countries were not. References to "the OECD" were also sometimes over-generalised and, because the focus of the conference was on the DAEs rather than the OECD countries, time could not always be taken to distinguish between initiatives of the Organisation or to highlight differences in the experience of individual Member countries.

But the overriding impression of the conference was that the people from the DAEs who took part in it found it useful and want a dialogue to continue. That well-worn word relevance was called on to sum up responses. The comparison that some were able to make is with UNESCO meetings and activities. What they found valuable about the Hiroshima Conference was a much greater community of interest with the educational issues on the OECD agenda, how they were conceptualised, their practical implications, and how the experience gained in OECD countries might relate to their own policy concerns. The point they made was that, perforce, UNESCO meetings (and those of comparable agencies) concentrate on development issues of concern to developing countries whereas, at Hiroshima, people from the DAEs were able to concentrate on

their own national concerns in contexts of interest that were shared by all other participants. And it can be said, too, that a similar process of recognition went on during the conference in the minds of several of the participants from OECD countries who were having their first opportunity to learn about educational development in the DAEs.

Some Shared Concerns

The conference was one during which those taking part spoke for themselves, in the light of their own experience. The points they emphasised and the concerns they expressed might not necessarily be endorsed by the governments of their countries. The two features of what was said, however, were, first, the extent to which some or all of the East Asian countries had shared perceptions of some common concerns and, secondly, the similarity of these concerns to some of the central issues now being faced by many OECD countries. The following paragraphs outline what I took to be main points of shared concern to emerge from the group discussions on the second day.

Economic and social development and the secondary curriculum

Government policies for education in the DAEs are driven by the twin objectives of nation building and national economic development. But in all six, educational objectives beyond the primary level have become deeply problematic: there is much re-thinking of the contribution that secondary education should be making to the development of human resources, and of later educational and training opportunities, whether in universities, other forms of higher education, in enterprises, or through self-directed continuing education. All six are experiencing rapid industrial development and they face the typical dilemma of modern industrial and post-industrial economies: how to articulate education and training systems to the rapid and often unpredictable demands of the skills market? There are mismatches not only between the demands of the employment market and the lack of appropriate skills among young people who have had no secondary schooling or very little, but also among secondary leavers whose skill levels are no longer relevant to the job market. That raises basic issues of policy for the conception and organisation of secondary education.

The DAEs differ considerably in secondary participation rates and in their policies for curriculum, the organisation of secondary education, admission requirements, and differentiation into academic, technical and vocational streams. There is a presumption in favour of curricula that are more broadly based for all students and are intended to develop general rather than specific vocational abilities and skills. But in Asia, as in the OECD countries, the tradition they draw on to conceptualise curricula and teaching approaches to develop the general skills and abilities of a mass secondary population is the one based on scholarly education for a rigorously selected academic elite. The influence of Confucian cultural values is a pervasive factor that gives this centrally important educational issue a different character from similar discussions in OECD countries. The intense pressure for secondary places and for admission to forms of higher education, and the sheer volume of the potential demand in countries such as the Republic of Korea, Taiwan and Thailand, pose bewildering structural problems.

Quality of teaching in universities

In the DAEs, as in OECD countries, higher education is an instrument of economic policy. In several countries (including Japan) there is a growing public interest in the internal efficiency of universities as teaching institutions. There is tension between the traditional autonomy

of professors and university institutions and a growing public interest in providing effective university education for the increasing number of students now admitted to them and the even larger numbers projected for the future. The Japanese Government has recently required public universities to initiate procedures for self-review and self-evaluation. There is a general concern in the DAEs about the low priority that (generally speaking) institutions of higher education are giving to policies aimed at better teaching and learning, and an equally general feeling that steps should be taken to identify and publicise good practice.

Public subsidies for private providers

Private schools and universities are settled features of public life in the Republic of Korea, Taiwan, and Thailand. Until recently they have had a marginal place in government policies for educational development. Now, however, the governments in all three countries are beginning to make greater use of financial subsidies to private institutions in recognition of their contribution to the education and training of the population. Thailand is employing the doctrine of consumer sovereignty to provide rural parents with vouchers that may be used in private as well as public secondary schools.

In Hong Kong, Malaysia, and Singapore official policies are carried out through the agency of public institutions. All DAEs, however, are dealing with very large increases in the demand for secondary and higher education. Such is the dynamism of their economies, furthermore, that their plans are for systems of higher education that will be much larger and more diverse. There is much that they could learn from each other's experience and from the experience of OECD countries. The different national policies that are being worked through in the DAEs provide opportunities for some potentially useful comparative studies of the costs, benefits, and equities of various policies for public and private providers. The issues raised are in principle the same as those already of active interest to OECD countries, which would have much to gain from as well as to give to such studies if they were to be set in an OECD/DAEs context of inquiry.

Studies abroad

All the DAEs represented at the conference have increasing numbers of students studying in universities and other educational institutions abroad. They have interests in statistics for such moves between countries, forms of assistance that will enable students to study abroad, barriers to movement, and problems of credit recognition, transfer, and professional registration. There is also an interest in studying students' experience of study in another country with a view to finding out how far their expectations are being met. Questions of brain drain and brain gain are also raised.

Quality of teaching and learning

From the time they began their formal education, children and young people in the DAEs are under unremitting pressure to score high marks in academic subjects, official curricula are narrowly prescriptive, teaching is largely geared to rote learning, public examinations drastically ration opportunities for education beyond the primary level, and high proportions of suitably qualified secondary leavers are unable to get a place in universities or other institutions of higher education. Experts at the conference from all the DAEs are concerned about the quality of the teaching and learning in their school systems. Their concerns are presented as major unresolved policy issues whose causes can be stated readily enough but for which effective remedies are a long way off.

The OECD countries have been wrestling with the various factors that contribute to improvements in the quality of public education for more than two decades and, although the circumstances of their education systems have not been as stark as those portrayed for the DAEs, there is a great deal of scope for further dialogue and co-operative effort with the DAEs on this most central of all educational policy issues.

Moral education

There were many references to moral and values education and, because they raise issues that are of concern in all the DAEs, as well as Japan, there would be a community of interest in exploring them further. At one level there is a concern whether, under pressure to prepare students for examinations, moral aspects of personal formation are being crowded out of school programmes. At another level there are concerns in some countries about the status of teachers and whether they are still able to perform the function of "second parent" in the moral formation of the young. Confucian and Muslim values provide the context of these discussions, but the need for multicultural understandings and for education for international understanding is also acknowledged.

Open learning

Given the agenda of the conference and the background of experience of those attending it, most of the discussion centred on teaching institutions as the main providers and face-to-face teaching as the main mode of formal education. But in terms of sheer numbers, Asia, South East Asia, and South Asia have vastly more students already enrolled in open universities than the rest of the world put together. Population projections for the DAEs make it clear, furthermore, that policies for open learning must become a major part of the provision of education. Developments in the DAEs have so far focused largely on open universities, but distance learning approaches have important contributions to make in secondary, technical, and vocational education, as well as increasing access for adults seeking a chance to broaden their knowledge or improve their qualifications. Among the OECD countries there is a good deal of experience of this more comprehensive use of open learning approaches, and the DAEs could well benefit from opportunities to evaluate it in the light of their own policy requirements.

Education indicators

There was considerable interest in the OECD indicators programme. The final plenary session received reports from the four discussion groups into which the conference had divided, and although there was time for some comments to be made on these there was no intention to identify issues that could become the subject of conference resolutions. But there was a strong wish on the part of the experts from the DAEs, widely expressed in the discussion groups, that further dialogue among themselves and with experts from OECD countries would be highly desirable. This was warmly endorsed by participants from OECD countries. The proof of the pudding had been in the eating. The group discussions demonstrated that each had much to learn from the other. Although the initiative for raising the matters to be discussed rested with experts from the DAEs, participants from the OECD countries clearly found themselves on familiar ground in many of the exchanges, and the discussions were richer for the wider range of perspectives from which recognisably common issues were viewed. Some of the issues raised by participants from the DAEs and explored in the discussion groups were: the relationship between research and teaching in higher education; how to assure the quality of education at all levels, including universities; principles to be kept in mind when establishing graduate schools; how to introduce and sustain innovative approaches in education systems that are under great pressure to conform to conventional

approaches; how to conceptualise and plan for vast increases in vocational education at the secondary level and through work-related training; how to introduce a multicultural, international flavour into school curricula in the DAEs; how to improve the quality of courses of initial teacher education; current or potential problems arising from the over-supply of university graduates.

The OECD Connection

The conference was able to point to educational issues from which the DAEs and OECD Member countries could benefit from further dialogue, but it was not empowered to make recommendations. In each case it will be for the governments of the DAEs to decide whether or how they will want their relationship with the OECD to develop. The conference demonstrated that it is not necessary for a country to be a member of the OECD to share in some of its benefits. The Organisation has an established practice of consulting with countries and agencies outside its mandate. It also has an established practice of inviting non-Member governments and experts from non-Member countries to attend meetings, conferences, and workshops, and it can call on the services of consultants from non-Member countries.

More than that, the OECD has already taken initiatives in education, of which the Hiroshima Conference was so far the most significant, to make itself known to the DAEs. Japan, as an Asian member of OECD, has a close interest in the possibilities of closer relations between OECD and the DAEs, and was intimately associated with the Hiroshima Conference. It has committed itself to host further annual conferences, enabling the possibilities of co-operation in educational development to be further examined. Australia has also offered to host a conference on higher education for OECD members and the DAEs and Korea has expressed an interest in being the first of the DAEs to host an OECD education conference.

There are possibilities, too, for involving experts from the DAEs in some aspects of the annual work programmes of CERI. And it can be seen from the issues listed above that educationists in the DAEs have concerns that are also OECD concerns, and CERI has projects that address them.[1]

All members of the conference, it should perhaps be recorded, shared the same basic assumption about the nature of a developing dialogue. It would be an association of equals. The DAEs were there because they had significant backgrounds of experience to bring to the discussion of topics that were also of concern to OECD Member countries. It was taken for granted, too, that, whatever their future relationship to the OECD, the DAEs would continue to participate in the work of a number of other regional and international organisations. The future of their relationship with the OECD would be shaped by the perception each would develop about the benefits to be gained from closer association.

The Pacific Circle Consortium

To most of those at the conference from the OECD countries as well as those from the DAEs, the Pacific Circle Consortium was a shadowy enterprise. One of the benefits of the presence of representatives of the PCC was the opportunity thus provided for members of the Governing Board to become better informed about one of CERI's regional activities.

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1 The Australian-hosted conference, with DAEs participating, was held in Sydney in June 1993; the Korean-hosted conference is to be held in Seoul in May 1994.

The PCC was established as a CERI activity in 1977. It was conceived as a regional activity, and the analogies within the Organisation were with the Mediterranean project and the consultations of the German speaking Member countries. Australia and New Zealand had joined the OECD in 1973, bringing to five the number of "Pacific rim" countries. Given the disposition to develop CERI activities that would not necessarily involve all Member countries, and also to redress Eurocentric tendencies, the PCC was seen as a way of providing Australia, Canada, Japan, New Zealand and the United States with a regional focus of interest.

The four English-speaking countries already shared various forms of educational co-operation. The PCC gave them an opportunity to find ways of working co-operatively with Japan as well as each other. The "Pacific" and "international understanding", the international interest at the time in curriculum development, and the professional interests of the people closely associated with its creation, guided it towards the development of curriculum materials. So far as CERI was concerned, the PCC was conceived as a decentralised activity. That is to say, it was to be conducted under the CERI imprimatur but would be self-governing in its membership, organisation, programme and funding. The analogy was with the Programme on Institutional Management in Higher Education (IMHE), but with the important difference that the administrative links between PCC and CERI through its Secretariat were tenuous. The CERI Governing Board's interest in the PCC is confined to its five Pacific rim members, who meet during Governing Board meetings as the PCC Policy Group to keep each other informed about PCC activities, make any decisions that may be needed, and report to the Governing Board.

The effective management of the PCC is undertaken by its annual general meeting, which is open to representatives of its member institutions. At present, nine are from Australia, one from Canada, two from Japan, two from New Zealand, and two from the United States. They comprise government ministries of education and curriculum development agencies, universities, colleges of education, university faculties of education, and curriculum research and development agencies. In the course of 15 years the members of the PCC have evolved styles of working and have amassed valuable experience in curriculum development and teacher development across national boundaries. Leading educationists from the five participating countries are included among its members. Perhaps its most important feature is one not often found among agencies engaged in curriculum developments. Its interest in the development of curriculum materials that will be used by school students has kept its members closely involved in the actual day-to-day business of schools and classrooms. It has produced classroom materials of good quality for the use of teachers and students in five countries; conducted research on school-related products; developed a Pacific-wide networks and communications system; published newsletters and occasional papers; demonstrated successful international educational co-operation; and organised annual conferences and workshops associated with its activities. It says of itself that it is working at the cutting edge of educational thought and policy in the development of curriculum materials, and an examination of its publications justifies that claim.

As set out in its policy statement, the PCC:

"-- designs curriculum development programmes and projects;

-- develops and publishes a range of quality materials;

-- undertakes education research on significant school-related topics;

-- disseminates educational programmes, ideas and information internationally;

-- analyses and synthesises educational policy issues and ideas;

-- designs and conducts professional development programmes.

The PCC provides a forum for:

-- communicating;

-- discussing;

-- exploring;

-- facilitating and organising the development of school-related programmes, projects and activities to improve learning and teaching about the peoples and countries in and around the Pacific Ocean;

-- promoting mutual understanding".

(Pacific Circle Consortium. Presentation Booklet. Published by Curriculum Research & Development Group, University of Hawaii for the Pacific Circle Consortium, 1992, p.2.)

The reference to "in and around the Pacific Ocean" records the regional nature of the PCC. It remains a consortium of people and institutions from five OECD countries. Throughout its existence, however, there has been a continuing discussion of the possibility of broadening its membership to admit institutions from Pacific countries that are not members of OECD. Such a broadening has been supported by the PCC, but the OECD response has until recently been unclear. The OECD position now is that institutions from non-OECD countries could be affiliated to the PCC. The way is thus clear for institutions from the DAEs and from elsewhere in Asia and the Pacific to develop working relationships with the PCC should they wish to do so.

It needs to be remembered that the relationship between the PCC and CERI is inevitably somewhat distant. Apart from lending its name, receiving reports on its activities, and defining the conditions of a continuing association, CERI had a largely passive relationship with PCC. The PCC could, if it wished, sever the connection with the OECD, perhaps without disadvantage to its operations.

In terms, therefore, of its 15-year history, the PCC has been marginal to CERI. Nor is it likely that relationships with the PCC would be a central concern to governments in the DAEs when they consider relationships with OECD. Regardless, however, of the outcome of informal dialogue with the DAEs, the Governing Board might wish to review its relationship with the PCC and to consider ways by which its exemplary approaches could be made more widely available. The conference did not consider the role of the PCC, in relation to CERI.

Conclusion

An initial conference cannot be expected to do more than scratch the surface in the discussion of substantive issues. What Hiroshima did -- and for this reason is to be adjudged a success -- was to establish that there are indeed policy issues in education that are of as much concern to the DAEs as they are to OECD countries. It demonstrated not only that dialogue with

new partners is possible but can be worthwhile for all who take part in it. To give one example. In terms of the social constraints on education, discussions in the OECD context are usually placed in socio-economic contexts of class, gender, and ethnic or cultural identity. But in the Asian context, Confucian (and, in Malaysia and Singapore, Muslim and Indian) values add highly significant dimensions as well. International discussion would be assisted by a closer examination of these pervasive cultural influences on educational objectives, curricula, the role of teachers, the interaction with family values, and assumptions about teaching and learning.

The Hiroshima Conference was a conference of experts who spoke for themselves and not necessarily for their governments. The "shared concerns" noted above are thus to be taken as indications rather than statements of collective official positions. But what was even more important than the subjects identified was the view expressed during the group discussions by several participants from the DAEs that their national systems would benefit from a continuing and a deepening dialogue with people from other DAEs and from OECD countries. The educational issues their countries are facing are such that they see themselves increasingly having more in common with OECD countries than with all but a few developing nations. There was no shortage of suggestions for future meetings, conferences, seminars, and workshops on specific issues raised during the conference. The expectation would be for these to explore differences as well as similarities -- both as between OECD countries and DAEs and within each grouping.

It seemed to me, too, that in the course of the conference the OECD participants concluded that further dialogue with the DAEs would also be beneficial to OECD Members and to the OECD collectively. Educational developments in the DAEs are such that a genuine community of interest with OECD countries is emerging that could become mutually beneficial. Certainly the subjects discussed at Hiroshima and the way they were discussed suggested a good basis for further dialogue. For my part I thought it an auspicious beginning.

It should perhaps be noted, as well, that, although the DAEs have enormous problems to overcome, there is not, as there is in some OECD countries, an accompanying sense that their education systems are unequal to the tasks they are facing. There are moves towards devolution and some rethinking of the role of the private sector in some countries, but these are being thought of as modifications of national systems in which central government agencies will continue to have directive powers. The impression given by those who spoke for the DAEs was of education systems under great pressure but not in crisis. If that is a correct perception it is one more reason why a continuing dialogue between OECD countries and the DAEs could be fruitful for all concerned.

Acknowledgements

The conference owed a very great deal to the efforts that Mr. Isao Amagi has made during two decades in his dual capacities as Special Adviser to the Japanese Minister of Education, Science and Culture and as a member of the Governing Board of CERI to foster closer association between the OECD and countries in Asia and the Pacific. It is fitting, therefore, that his central role in the conception of the Hiroshima Conference be recorded and acknowledged. Mr. Malcolm Skilbeck, Mr. Keisuke Yoshio, and their colleagues in OECD, and Professor Yasushi Mizoue, his colleagues at Hiroshima University, and the Japanese academics and administrators who worked with him, are to be congratulated on the excellence of all the arrangements. Members of the conference were also full of praise for the support the organisers received from the Prefecture and City of Hiroshima. It was a warm as well as a rewarding experience to visit Hiroshima, symbol, as it is, of peace, hope, and human renewal.

ANNEX 1

ANNOTATED AGENDA

The Conference will have a President, Chairman of the plenary sessions and General Rapporteur. Working groups will have their own chairmen and rapporteurs as well as lead speakers.

President: Mr. Isao AMAGI, Member of the CERI Governing Board, Japan

Chairman: Mr. Malcolm SKILBECK, Deputy Director for Education, OECD

General Rapporteur: Mr. William RENWICK, Honorary Senior Research Fellow, Stout Research Centre, Victoria University of Wellington, New Zealand.

Wednesday, 7 October 1992

09.30 REGISTRATION

10.00 OPENING OF THE CONFERENCE

Opening Addresses

10.30 -- 12.00 OPENING SESSION: KEYNOTE ADDRESSES (PLENARY)

Keynote Addresses

As keynote addresses, the OECD, Hiroshima University, an OECD Member country and the Pacific Circle Consortium will present an overview of the rationale for the Conference, events leading to it and the different dimensions of educational policies and activities that are to be discussed. Attention will be drawn to: the goals of the OECD's informal dialogue with the Dynamic Asian Economies (DAEs); the importance of educational issues in the informal dialogue; the educational roles and responsibilities of the OECD; educational developments in the Asia-Pacific region; OECD countries' views on co-operation with the DAEs; the role, current and future activities of the Pacific Circle Consortium (PCC).

General Discussion

14.00 -- 17.30 SECOND SESSION: VIEWS FROM THE DAEs (PLENARY)

Presentations

An expert from each of the DAEs will provide for his or her country, views on educational development in general, and educational policy

and research priorities in particular. The experts will also report on specific experiences of international co-operation in educational research.

Comments by General Rapporteur

General Discussion

Thursday, 8 October 1992

09.30 -- 12.00 THIRD SESSION: WORKING GROUP DISCUSSIONS

13.30 -- 17.00 FOURTH SESSION: WORKING GROUP DISCUSSION (CONTINUED)

While wide-ranging discussions and an exchange of views and information are envisaged throughout the conference, working group discussions will facilitate more focused and substantive discussions on specific educational developments and concerns. Two working groups will concentrate, respectively, on primary and secondary education issues and higher education issues.

Each working group will be asked to address three themes (or subsections) which are designed to facilitate both specialised exchanges and broader coverage of various concerns of participants. Discussions will be introduced by short presentations by lead speakers, illustrating issues to be considered, which will be followed by comments and questions by a respondent, leading into a group exchange of views, concerns and policy issues. Working groups are expected to conclude by recapitulating discussions, with a view to identifying particular issues for future co-operation between the OECD and the DAEs, including practical co-operative work that might be carried out with the DAEs by the PCC.

WORKING GROUP I: PRIMARY AND SECONDARY EDUCATION

Developments in the area of the OECD and in the DAEs have raised concerns about both the quantitative evolution and the quality of primary and secondary education. Organisational and structural issues have arisen in the course of dramatic expansion of access to all levels of education. Broader economic, demographic and social developments have given renewed emphasis to concerns about the quality and cost effectiveness of provision. The quality and relevance of initial education represent the foundation on which advanced knowledge and skills are built. Primary and secondary education are now expected to provide curricula and learning opportunities suitable to each child in an ethos of high social expectations. The demands on schools and teachers are imposing: they must incorporate high levels of competence in relation to content and methods of learning, promote the acquisition of knowledge and skills, mediate culture and values and reflect contemporary change in society.

1) Curriculum of Quality and Relevance: Responses to Changes and Challenges

A number of countries are currently experiencing far-reaching changes in the overall framework of the curriculum, in the pattern of required/optional studies, in the roles of different agencies and actors in curriculum planning and implementation and in subject content.

Economic and social demands in industrialised societies are being reflected most explicitly, but not exclusively, in the efforts to improve and enrich science, mathematics and technology education. It is important to note that in the rapidly changing society more and more attention has been drawn to values and morals/civic education in various contexts. One overall trend in curriculum changes is an increased emphasis on inter-cultural understanding throughout all levels of education, in the increasingly interdependent world.

The development and introduction of systematic, effective means for evaluation and assessment is, in many countries, seen as an integral part of curriculum reform and educational change. For these countries, monitoring of national standards and accountability may be sought through national assessments of pupil achievement in basic skills and core subjects. A second development of interest is the introduction of new approaches to assessment which more closely integrate assessment with learning.

Questions for debate:

i) What are the forces and factors producing these changes? To what extent and in what ways do they reflect changing economic and social demands, and how far do they go towards addressing the needs of the diverse student populations?

ii) What are the rationales and basic strategies adopted for values and morals education as well as for intercultural understanding? How are they considered in curriculum planning and how are they implemented in practice in the school and classroom?

iii) Are national, regional and local level reform strategies attaining their objectives? What approaches are used to gauge or verify progress toward or attainment of national standards? Which aspects of the curriculum and stages of education should be covered in such assessments? Which assessment methods are feasible and reliable, and how can such methods be developed and implemented?

2) Teachers and Schools: Quality and Effectiveness

Better management of educational resources at various levels can contribute significantly to improving the effectiveness of schools and their outcomes. Changes and reforms in administration, structure, and curriculum, evaluation practices, resource management (human, physical and financial resources) in education systems, and leadership, management and innovation of and by schools are needed and in many countries are well under way. Developments in and around schools include shifts in the balance between central direction and regional and local autonomy, greater attention to the selection and education of managers and to the expanding roles of "non-professionals" in governance,

especially at the local level. Difficult issues of resource management, control, and the balance between public and private financing are emerging.

As for teachers, there is particular interest in how formal teacher education programmes and other initiatives might better promote and foster the upgrading and professional development of teachers already on the job. Some manifestations of this interest are a trend to require full higher education qualification for all teachers, and concern about the content of programmes and the balance among the many different elements within them. There are also growing concerns about the adequacy of supply: numerical shortages in some fields (mathematics, science and vocational/technical education) and geographic areas.

Questions for debate:

i) To what extent do everyday school practices and decisions correspond with established or prescribed/recommended administrative procedures? What are the obstacles to good management and other factors affecting school effectiveness? What kind of changes are taking place for better management of schools?

ii) What policies and measures have been adopted to bring about improvements in teacher quality? Is the supply of qualified teachers sufficient to meet stated demand, and if not, what steps have been taken to improve recruitment or retention while sustaining and improving the quality of the teaching force?

iii) What tasks arise from the above changes and trends for educational research and development?

3) Organisational and Structural Responses: Expansion and Diversification of Secondary Education

Whether as a result of policy decisions or structural considerations leading to an increase in retention rates, or owing to increases in the size of age cohorts, increases in the number of secondary students have been recorded in some OECD countries (France and Australia among them) and in most DAEs. In these countries and in others, there appears to be a trend toward the diversification of secondary education (particularly upper secondary education). The types and articulation of secondary education, as well as the balance at this level between vocational and general education and public and private provision, vary among countries. Pathways into further education, work (or, for many, unemployment) are a subject of concern.

Questions for debate:

i) What are the educational responses at the secondary level to increases in enrolment (in some countries) and a student population which is more diverse in terms of aptitudes, capacities and interests? What is the balance between vocational and general education at this level and how are they provided for in different institutional settings (including the place of work experience)? To what extent is secondary schooling provided by private as distinct from public schools and institutions?

ii) What services for guidance and orientation of students exist? What is done -- or needs to be done -- at this stage in order to reinforce learning, to make up for earlier gaps or inadequacies? What role does or might the employment sector play in policy and practice at this stage?

WORKING GROUP II: HIGHER EDUCATION

In the area of the OECD and in the DAEs, both quantitative expansion and diversification of provision now figure prominently in higher education development. Efforts since the 1960s to accommodate the growth in enrolments have raised concerns which persist today, including the need to sustain quality in academic programmes and issues of finance, management and the quantity and quality of staff. Structural changes in production and employment and broader social and demographic developments have led to renewed concerns about the relevance as well as the quality of higher education. The changes have emerged, in part, as a consequence of the growing interdependence among countries and economies -- a trend which has profound implications for the internationalisation of higher education.

1) Quality and Relevance: Improvement of Instruction and Research, and Enhancement of Responses to Social Demands

As systems of higher education have expanded to accommodate growing numbers of students (in some countries, distance education has played a significant role to respond to this expansion), concerns about the quality of academic programmes and research activities have emerged. Government and institutional authorities have taken various measures to ensure high quality instruction and research, including an improved screening system for university entrance; more rigorous evaluation of faculties; new means for staff development; reforms of curricula and teaching methods; and changes in procedures for supporting and monitoring R&D. These efforts have been accompanied by new approaches to recruitment, promotion and career paths for different categories of teaching and research staff.

At the same time, there is shared interest in ensuring that academic and research activities are relevant to requirements for sustainable growth and a wide range of social needs. In this connection, it is argued that academic programmes inadequately develop in students the types of knowledge and skills required on the job and governments are concerned about the extent to which countries can best exploit results of university-based research. Another concern is the role higher education plays in lifelong learning, to include the continuing professional education of highly-educated workers. The impact of these more instrumental approaches upon the role of higher education in scholarship, criticism and the advancement of general, liberal education is a source of considerable concern and controversy in several countries.

Questions for debate:

i) What is the current perception of quality in higher education? What efforts are being taken to evaluate quality in teaching and research? What measures have been adopted to ensure, and promote improvements in, quality in these areas?

What specific strategies have been followed to maintain and improve the quality of teaching and research staff?

ii) What are the means through which economic and social needs are conveyed to higher education? What are the means whereby higher education responds to these needs? What are the forms and extent of co-operation between higher education and industry? With respect to social and economic relevance, which areas are now most problematic? How are the identified needs being handled in both the teaching and R&D activities of universities? What steps are being taken to achieve a balance between the more traditional roles of higher education, in scholarship and general liberal education, and these economic and social demands? How can open and distance learning and technological innovation contribute to these social demands for increased relevance, quality of instruction and expanding opportunities for lifelong learning?

2) Financing and Management: New Forms of Financing and New Mechanisms for Management

In the area of the OECD and in the DAEs, pressures on the public budget, coupled with increased enrolments, have stretched public funding for higher education. In this period of financial stringency, when there is often gross overcrowding in lecture halls and laboratories and acute pressure on research budgets, concerns for the quality of instruction and research have increased. Poor employment prospects for higher education graduates in some countries have also drawn attention to the need for programmatic responses. Together, these developments have stimulated work on new forms of financing and new mechanisms for control, accountability and management.

Questions for debate:

i) What is the current pattern of financing of higher education? Have there been changes toward devolution and institutional autonomy in higher education, and, if so, what are the effects on resource allocation and on the management of institutions? What appear to be the most successful patterns of resource distribution and management in higher education (system and institution)?

ii) How might higher education best respond to the challenge of declining employment prospects for many graduates? Are there examples of positive and successful policy responses to the "crisis" in graduate employment?

3) International Dimension: Exchanges and Co-operation Across the Border

International student flows have increased substantially over the past two decades, giving rise to new questions about higher education structures, programmes and management. Specific issues of interest include credit transfer and recognition, counselling and social support for international students, language instruction and programme development at the faculty, institution and system levels (the latter to include co-operative arrangements among institutions of higher education such as "split-site" arrangements, joint-programmes, distance learning programmes etc.). The new international setting for higher education implies a broader set of issues, such as the appropriate profiles and development of staff and the organisation and financing of research.

Questions for debate:

i) What have been the systemic and institutional responses to international students? Have international student flows influenced course contents and methods? Has study abroad been evaluated with respect to its effects on students and institutions? To what extent is research organised and financed on an international, co-operative basis? How is "internationalisation" best defined? To what extent have relevant policies and practices been effective in achieving internationalisation?

ii) As international employment opportunities open up for graduates, questions arise about the comparability of courses and qualifications and the barriers that exist to a "free trade" of qualified personnel. How are these questions being addressed? What is being done to lower (or, in some instances, raise) barriers? What changes at institutional and national policy level are needed to meet these challenges?

Friday, 9 October 1992

09.30 -- 13.00 FIFTH SESSION (PLENARY)

Brief Syntheses of the Working Group Discussions

There will be brief syntheses and reports on the proceedings of the working groups, with participant response.

Concluding Panel Discussion: Future Perspective of Educational Co-operation in the Asia-Pacific Region

Panel Co-ordinator: Mr. Malcolm Skilbeck (OECD)

This will be a "round-up" of conference discussions and presentation of specific views about educational co-operation. Panellists (5-6) will provide three or four key ideas on the substance and forms of co-operation in and with the region, based on the conference discussions.

Open Discussion

14.00 -- 15.30 CONCLUDING SESSION (PLENARY)

Brief Synthesis and Comments by General Rapporteur

Concluding Remarks by President of the Conference

Closing of the Conference by the Chairman

ANNEX 2

ANNOTATED BIBLIOGRAPHY: OECD REFERENCE AND BACKGROUND DOCUMENTATION ON ISSUES FOR WORKING GROUP DISCUSSION PREPARED BY THE OECD SECRETARIAT

The following OECD documents/publications are for reference and background on issues suggested for discussion and written contribution in CERI/IEA(92)1. Unless otherwise indicated documents are available in English and French.

PRIMARY AND SECONDARY EDUCATION

Organisational and Structural Matters

1. Educational Planning: A Reappraisal (1983) OECD

This report reappraises educational planning and investigates possible new forms adapted to socio-, politico-, economic developments which took place in OECD Member countries during the 70s; i.e. more emphasis on the markets and decentralisation, low economic activity resulting in high unemployment and public budget stringencies, etc.

2. Schools and Quality: An International Report (1989) OECD

During the 1980s concern for the quality and effectiveness of the substantially increased investment of public resources in schooling rose high on the agenda in many Member countries. But what is educational "quality", how is it best ascertained and what steps are open to educators, policy makers and the wider public to make needed improvements? Issues of quality arise in all facets of education and new measures are required to address them.

3. Pathways for Learning: Education and Training from 16 to 19 (1989) OECD

The structure and the content of studies designed for the growing number of adolescents who enrol in some form of education and training after completing basic compulsory schooling are changing. The validity of the traditional distinctions between general, technical and vocational education are challenged and the view of education at this level as a foundation for future work and studies is advanced.

4. Schools and Business: a new partnership (1992) OECD/CERI

There has been an explosion of contacts between schools and business in recent years. This report attempts to document this phenomenon at the international level. It illustrates the main features of partnerships with 24 case studies in nine OECD countries. Activities range from mini-enterprises and teacher retraining to curriculum reform. The study analyses the motives behind

such links, and looks at what they can achieve. It concludes that partnerships with businesses will become an increasingly central part of schools systems and of attempts to reform them.

Curriculum Matters

5. Curriculum Reform -- An Overview of Trends (1990) OECD/CERI

For the first time an overview is provided of the state of the art in curriculum development across OECD Member countries. Amidst widespread organisational and administrative reform, and growing interest in what constitutes effective education, discussed in the report are issues such as testing and accountability, curriculum strategies at national, regional and local levels and school reform measures analysed in a comparative and historical perspective.

6. Learning to Think: Thinking to Learn (1991) Pergamon Press

Three broad ways or forms of thinking are explored, in the context of education: the "skills" approach: the "infusion" model: and the belief that the traditional disciplines and pedagogy of education already provide for the development of thinking. Issues arising were debated at an OECD international conference of which this is a synthesis and overview.

7. Multicultural Education (1987) OECD/CERI

Based on a unique collection and analysis of international statistics, this report describes the evolution of initiatives taken over the last 15 years in the education of immigrants' children. A frank and clear assessment is made of the results achieved in the course of an analysis of factors associated with inequalities at school.

8. One School Many Cultures (1989) OECD/CERI

The development of educational policy under the pressure of cultural and linguistic movements in OECD countries is critically assessed. The schooling of ethnic minority groups, confrontation of national identities with the world-wide culture of contemporary industrial societies and conflicts between individual freedom of choice and the attachment to community values are among the problems discussed.

Teachers

9. The teacher today (1990) OECD

Teachers are today the primary focus of educational policies and debate in most OECD countries. Why this is so and the challenges confronting educational policies are the subject of this report. New teacher roles and tasks, the changing composition of the profession, the problematic issues of status and supply, and the teaching process itself are examined in the context of changing educational policies and practices.

10. The University Under Scrutiny (1987) OECD

Major new problems and dilemmas are emerging as higher education undergoes rapid expansion and change. If universities are to continue to make a vital contribution to post-industrialised societies, they will have to participate more actively in social and economic development while maintaining their strengths as centres of excellence.

11. Post-Graduate Education in the 1980s (1987) OECD

Major changes have occurred in post-graduate education in OECD countries since the 1970s: notably different patterns of attendance in higher education, changes in employment prospects for graduates, and new pressures on universities to respond to a rapidly changing economic and technological environment.

12. Alternatives to Universities (1991) OECD

The development of the non-university sector in higher education is a prominent feature of higher education in a number of OECD countries. During the 1980s this sector most often succeeded in enhancing its standing and recognition among students, employers and the academic world alike. Its progress in the 1990s will depend on how it meets the challenge of greater competition from the universities on the one side, and the growing post-secondary "third" sector -- market-oriented and often private -- on the other.

Quality and Institutional Improvement in Higher Education (Decentralised Programme of Institutional Management in Higher Education -- IMHE)

13. Higher Education Management (issued three times per year) OECD/IMHE

The OECD Programme on Institutional Management in Higher Education (IMHE) serves as an international forum for administrators, researchers and policy makers in higher education. Apart from fostering exchanges of information through meetings and seminars, IMHE provides publications of interest to its various audiences. Its journal, **Higher Education Management** is published in March, July and November. Each issue contains articles, both related to and independent of the work at IMHE, as well as reports and book reviews.

14. Evaluating Higher Education, (1989) Maurice Kogan (ed.), London; Jessica Kingsley Publishers.

Articles are drawn from **Higher Education Management** which display the wide range of possible approaches to the evaluation of higher education that can be found at different levels in different systems.

15. The Development of Performance Indicators for Higher Education - A Compendium for Eleven Countries, (1990) H.R. Kells (Editor), OECD, restricted

A status report on the development and use of performance indicators for higher education in 11 OECD countries.

16. Dimensions of Evaluation in Higher Education, (1991) U. Dahllöf, J. Harris, M. Shattock, A. Staropoli, R. in't Veld, London; Jessica Kingsley Publishers.

Key issues in evaluation in an international, a national and a long-term perspective are analysed in a series of essays. Arguments about the nature and techniques of evaluation entail wider considerations than those often promoted by policy makers.

Relevance of University Teaching and R&D to Social and Economic Needs

17. Industry and University -- New Forms of Co-operation and Communication (1984) OECD

New forms of co-operation and collaboration are developing between industry and universities. Current initiatives for closer interaction, the new motivations for collaboration on the part of both parties, novel approaches for individual countries, and problems and prospects for strengthening relations are all reviewed.

18. The Flows of Graduates from Higher Education and Their Entry into Working Life (1992) OECD documents series

The four volumes in this series gather together all of the data available in OECD countries at the end of 1990 on flows of graduates from higher education and their entry into employment. Data are assembled and presented in such a way that a cross-country comparison of outflows from higher education and inflows into working life can be made -- the differences in approach and philosophy from one country to another are plain.

19. Adults in Higher Education (1987) OECD/CERI

The numbers of adults enrolling as students in universities and other centres of higher education in OECD countries have grown so large they may now be considered a distinct group recognised by policy-makers. This report reviews a number of programmes that certain OECD countries have developed to satisfy their requirements.

Financing and Management of Higher Education

20. Financing Higher Education -- Current Patterns (1990) OECD

During the past decade there have been significant changes in the nature and patterns of financing and control of higher education systems in OECD countries. The links between expenditure patterns, costs and efficiency in higher education in relation to the mechanisms by which institutions receive funds are considered against the background of changing policies for public financing.

Internationalisation of Higher Education

21. Foreign Students and Internationalisation of Higher Education (Hiroshima, 1989, RIHE).

The proceedings of a Japanese-OECD seminar (1988), published by Research Institute for Higher Education, Hiroshima University

22. **Higher Education** (Vol.21, No.3, April 1991, by Kluwer Academic Publishers, the Netherlands): several of the papers prepared for the German-OECD seminar in Hannover (1990) appear in a special issue of this journal.

ADDITIONAL RELATED PUBLICATIONS

1. Education and the Economy in a Changing Society (1989) OECD

As OECD countries face far-reaching economic and social changes, the need to adjust their educational systems to new requirements is becoming urgent. This volume reports on the discussions and conclusions of an OECD conference on this subject involving governments at the ministerial level and social partners. For the first time a political consensus was reached internationally in identifying problems and approaches to their solutions.

2. OECD Employment Outlook (1989) Chapter 2, "Educational attainment of the labour force".

3. OECD Employment Outlook (1991) Chapter 5, "Enterprise based training".

4. Information Technologies in Education: The Quest for Quality Software (1989) OECD/CERI

Rapid progress in information technology has led to the proliferation of educational software of heterogeneous types and quality. Choosing the software that can be integrated into the curriculum requires detailed information and reliable reviews and evaluations. This report analyses such mechanisms set up by educational agencies, discusses the main issues and stresses the necessity for government support and international co-operation in this area.

5. Information Technologies and Basic Learning: Reading, Writing, Science and Mathematics (1987) OECD/CERI

Quality in education is a central preoccupation in all OECD countries. This study, carried out in an international context, seeks to define the role and the future of information technologies in improving the acquisition of basic knowledge and skills. The necessity for political will and international co-operation in order to exploit fully the potential of these technologies is emphasized.

6. New Information Technologies: A Challenge for Education (1986) OECD/CERI

The new information technologies are already penetrating the educational sector, inspired by objectives, policies and implementation strategies which vary considerably between countries. A first evaluation is provided of current trends and the impact of developing technologies on learning and education systems is assessed.

7. Disabled Youth: From School to Work (1991) OECD/CERI

Case studies of policies and provision for transition to work

8. Adult Illiteracy and Economic Performance (1992) OECD/CERI

In what ways can remedial programmes for adults become more effective? A "literacy gap" has been produced not by a fall in educational standards but by a rise in the literacy levels required of workers in modern economies. New measures are required to meet these changing expectations.

9. High Quality Education and Training for All (1992) OECD

This report of the Ministerial level meeting of the Education Committee on 13-14 November 1990, including summaries of the discussion, the Communiqué, the analytical and statistical reports, as well as the joint BIAC/TUAC statement is in press.

ANNEX 3

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