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AND CULTURAL ORGANIZATION

Second International Congress on
Technical and Vocational Education

Final Report



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UNESCO would like to express its sincere appreciation to all those who contributed their work to the Congress.

INTRODUCTION

Background

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) organised the First International Congress on the Development and Improvement of Technical and Vocational Education in Berlin in 1987. This Congress led to the creation in 1992 of UNESCO's International Project on Technical and Vocational Education (UNEVOC) which has the goal of strengthening the development and improvement of technical and vocational education (TVE) in the Organisation's Member States.

More than ten years after the Berlin Congress, and on the eve of the twenty-first century which will be the era of knowledge, information and communication, the emerging challenges such as globalisation and the revolution in information and communication technology have signalled the need for a new human-centred development paradigm. Technical and vocational education, as an integral component of life-long learning, has a crucial role to play in this new era as an effective tool to realise the objectives of a culture of peace, environmentally sound sustainable development, social cohesion and international citizenship. Many stakeholders in the field of TVE were therefore convinced that it was time to have another international forum to examine how this area of education must adapt to these new phenomena.

Organisation and scope of the Congress

To address the above-mentioned needs, the Second International Congress on Technical and Vocational Education (hereinafter referred to as "the Congress") was held in Seoul, Republic of Korea, from 26 to 30 April 1999. It was organised by UNESCO, in accordance with its approved Programme and Budget for 1998-1999, with the co-operation of the Government of the Republic of Korea.

The principle objective of the Congress was to convince governments, donor agencies, industries and all stakeholders of the importance of technical and vocational education for development. The Congress was organised to gather all social partners of TVE to exchange experience and suggest how policy and practice may be renovated in order to render this sector of education more relevant to the employment and social demands of the future.

Accepting the invitation of the Director-General of UNESCO, a total number of 720 participants and observers including 39 Ministers or Vice-Ministers from 130 countries (126 Member States and 4 non-Member States), 3 UN agencies and 29 inter-governmental and non-governmental organisations attended this important international event. A list of the participants is attached as an Annex.

Preparation for the Congress

After an extensive consultation with Member States, professional institutions and specialists, it was decided that the Congress would focus on the following six main themes:

1. The changing demands of the twenty-first century: challenges to technical and vocational education;
2. Improving systems providing education and training throughout life;
3. Innovating the education and training process;
4. TVE for all;
5. Changing roles of government and other stakeholders in TVE; and
6. Enhancing international co-operation in TVE.

Innovation and reform of technical and vocational education in the Republic of Korea was also introduced during the Congress as a special theme.

Prior to the Congress, a series of regional and sub-regional preparatory conferences were organised to bring into focus the experience and needs of TVE in regions and sub-regions as follows:

- *UNESCO-UNEVOC International Conference on Vocational Education in the Asia-Pacific Region* (25-27 March 1998, Adelaide, Australia), organised by the Adelaide Institute of TAFE in co-operation with UNESCO Headquarters;
- *Regional Symposium on Vocational Education and Training in Europe on the Threshold of the 21st Century* (23-26, September 1998, Crete, Greece), organised by the Greek Organisation for Vocational Education and Training (OEEK) in co-operation with the UNESCO-UNEVOC Implementation Unit in Berlin;
- *Regional Conference for the Arab States in preparation for the Second International Congress on Technical and Vocational Education* (1-4 November 1998, Abu Dhabi, United Arab Emirates), organised by the Higher Colleges of Technology of United Arab Emirates, in co-operation with UNESCO Office in Beirut;
- *Regional Preparatory Meeting for the Second International Congress on Technical and Vocational Education* (23-27 November 1998, Quito, Ecuador), organised by UNESCO Office in Santiago de Chile;
- *African Regional Consultation for Preparation of the Second International Congress on Technical and Vocational Education* (24-27 November 1998, Nairobi, Kenya), organised jointly by UNESCO Office in Dakar and UNESCO Office in Dar es Salaam; and
- *Sub-regional Preparatory Meeting for the Second International Congress on Technical and Vocational Education in the Countries of the Commonwealth of Independent States, Central and Eastern Europe* (10-12 March 1999, Moscow, the Russian Federation), organised by the Russian Federation Ministry of General and Professional Education, Moscow Education Commission and UNESCO Institute for Information Technologies in Education (IITE).

A Main Working Document was prepared by UNESCO (the Section for Technical and Vocational Education) based on the contributions made by selected experts in the field of TVE and disseminated prior to the Congress. Six reference documents addressing major issues in TVE were prepared by UNESCO's partner organisations. A list of documents is attached as an Annex.

Opening

The Opening Session of the Congress began at 9:00 am on 26 April 1999 in the Inter-Continental Hotel, in the presence of Mr KIM Jong-pil, Prime Minister of the Republic of Korea and Mr Federico MAYOR, Director-General of UNESCO.

In his welcome address, the Prime Minister underlined the importance of the work carried out by UNESCO to promote technical and vocational education world-wide "to give individuals the skills they need for change." "It is timely and useful," he said, "that delegates from UNESCO's Member States gather here to find the road for the future of technical and vocational education, contributing both to individual nations' development and to international co-operation."

Mr Federico MAYOR, Director-General of UNESCO, in his opening address, strongly urged "the governments of Member States, inter-governmental and non-governmental organisations and the development agencies to join UNESCO's efforts to renew commitment to education," which he described as "a matter of extreme urgency."

Mr MAYOR said "Seoul is the most appropriate venue for this Congress because the Republic of Korea has proved beyond any doubt that education, including technical and vocational education and training, is a decisive factor in development."

Highlighting the challenges of the 21st century, he said: "Education is the single most powerful means to improve the quality of life, the single most powerful weapon against poverty and intolerance. Education builds a culture of peace. Governments need to be more aware of the social and economic relevance of skills and should provide technical and vocational education with a commensurate share of social investment." Mr MAYOR called on international funding agencies to "transform part of the developing countries' debt into educational funding, particularly for technical and vocational education."

Mrs Mitsuko HORIUCHI, Assistant Director-General of the International Labour Office (ILO) delivered a congratulatory address. She spoke of the long-standing co-operation between ILO and UNESCO, notably in the field of vocational education and training. She also mentioned "ILO's efforts to develop a more adaptable labour force targeting smoother transitions from school to work; public/private sector partnerships for the delivery of training and the promotion of life-long learning."

Mr LEE Hai-chan, Minister of Education of the Republic of Korea officially declared the Congress open.

On the same day, Mr KIM Dae-jung, President of the Republic of Korea hosted an official luncheon for all heads of delegations from UNESCO Member States in the Office of the President (the Blue House) and addressed the gathering.

Work of the Congress

During the first plenary session, Mr LEE Hai-chan, Minister of Education of the Republic of Korea was elected President of the Congress by acclamation and assumed office.

The Congress then adopted its Rules of Procedure and elected by acclamation the following as Vice-Presidents and Rapporteur-General:

Vice-Presidents:

Mme Orlanda Santos FERREIRA (Cap Vert)
Mr Hussein Kamel BAHAA EL DIN (Egypt)
Mr Gerassimos SAPOUNTZOGLU (Greece)
Mr Andras BENEDEK (Hungary)
Mr Robert GREGORY (Jamaica)

Rapporteur-General:

Mr Kenneth WILTSHIRE (Australia)

The Congress decided to establish four Commissions (working groups) to deal with the Main Themes 2, 3, 4 and 5. Such arrangements allowed more in-depth study and treatment of each theme, with more active participation of the audience. The following were appointed as Co-Chairpersons and Rapporteurs of the Commissions:

Commission I:

Co-Chairpersons: Mr Munther AL-MASRI (Jordan)
Mrs Marianne NGANUNU (Botswana)
Rapporteur: Mr Wanjala KERRE (Kenya)

Commission II :

Co-Chairpersons: Mr Hermann W. SCHMIDT (Germany)
Mr Ali N. ALGHAFIS (Saudi Arabia)
Rapporteur: Ms Madeleine WOOLLEY (Australia)

Commission III:

Co-Chairpersons: Mr C.K. BASU (India)
Mr Andras BENEDEK (Hungary)
Rapporteur: Ms Di BOOKER (Australia)

Commission IV:

Co-Chairpersons: Mr Ihron RENSBURG (South Africa)
Mr Ahsan Ullah KHAN (Pakistan)
Rapporteur: Mr Ahmed FERREJ (Kenya)

Under the Rules of Procedure, the Bureau of the Congress comprised the President, five Vice-Presidents, the Rapporteur-General and the Co-Chairpersons of the Commissions.

The Congress met in plenary sessions on 26 (Theme 1), 29 (Theme 6) and 30 (the Special theme) April, whereas the Commissions held their sessions on 27 and 28 April. The results of the discussions in each Commission were reported to the plenary session on 29 April. Based on the discussions that took place during the plenary and commission sessions, the Draft Recommendations were formulated by Mr Kenneth WILTSHIRE, the Rapporteur-General with the assistance of Mrs Marianne NGANUNU (Botswana) and Mr Arun MISHRA (India). This document was approved by the Congress in the final plenary session following the oral report made by the Rapporteur-General. Both the approved Recommendations and the text of the Rapporteur-General's oral report are presented in this report.

Parallel events

An informal meeting was held on 27 April for the Ministers and Vice-Ministers participating in the Congress to meet the Director-General of UNESCO. The ministers voiced their firm political commitment to developing and investing in technical and vocational education as an essential component of their national education development agendas.

Parallel to the work of the Congress, seven Round-Tables were organised by UNESCO's institutions and partner agencies at the Congress premises on 27 and 28 April. A list of these events are attached as an Annex.

An International NGO Forum was also held under the theme "Strengthening NGO's role in developing technical and vocational education and international co-operation between NGOs". A summary of this Forum is attached to this report.

From 27-30 April, an International Exhibition on Technical and Vocational Education was organised next to the Congress venue, under the title "Work, Education and the Future", in which 110 domestic and international organisations and companies participated. The Exhibition attracted more than 40,000 visitors including thousands of high school students from Seoul.

On 29 April, study visits were organised by the host country for the participants and observers of the Congress to visit 13 TVE establishments and industries in the Seoul region. The trips provided excellent opportunities for all foreign visitors to obtain first-hand impressions of the achievements of technical and vocational education and training in the Republic of Korea.

Closure

Addressing the closing session, Mr Colin N. POWER, Deputy Director-General for Education, UNESCO once again thanked the Government and the people of the Republic of

Korea for the wonderful manner in which they supported the organisation of the Congress and for their warm hospitality. He stressed that “today, more than ever before, technical and vocational education and training has become a necessity not only for young people who will have to prepare themselves for the challenges of the next century, but also for the entire population of each country so that every individual can play an active role in the world of the 21st century, which will seek to narrow economic and gender disparities while preserving the integrity of the environment.”

Mr POWER appealed to all partners of UNESCO to “intensify their support to all developing countries, particularly in the domain of technical and vocational education and training where the need is the greatest.” He ensured all participants that their recommendations “will be taken into full account as UNESCO’s Global Strategy for Technical and Vocational Education and Training is reformulated to guide the Organisation’s programme for the 21st century.”

Mr LEE Hai-chan, President of the Congress, in his closing remarks emphasized the integration between vocational education and general education and pointed out that “technical education and vocational training should be a basic component for the education and training system in each country”. He expected that “excellent national technical and vocational education policies would be formulated with the help of the Recommendations provided by the Congress.” Finally, Mr LEE declared the Congress closed.

KEYNOTE PRESENTATIONS

The Changing Demands of the 21st Century : Challenges to Technical and Vocational Education

Munther W. Al-Masri

President

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Introduction

Technical and Vocational Education and Training (TVET), or Vocational Education in brief, should be dealt with, and its issues approached, within the more comprehensive concept of Human Resources Development, a concept that comprises the supply side or sources of human power, as well as the linkages and channels between the supply and demand sides of human power.

The supply side covers, as is well known, such sources as the various levels and fields of formal and non-formal education and training systems, including vocational education. It also covers additions to the labour force from external sources such as immigrant labour. The linkages between the supply and demand sides of human power, on the other hand, which should be considered essential elements of the concept of human resources development, comprise such components as information systems, legislative tools, occupational classifications and standards, employment services, career guidance and counselling services, research and development in the concerned fields, and the relevant institutional set-ups in the form of councils, boards, committees and administrative units.

Considering its nature, content and methodology, vocational education is strongly rooted in educational ideals and objectives, on the one hand, and is thoroughly permeated by labour market criteria and work standards, on the other. To ensure both the human and professional aspects of vocational education, two major dimensions should always guide the design of the relevant schemes and systems: EDUCATION and WORK. The educational dimension caters more for the individual needs and human aspects, while the work or economic dimension caters more for societal needs and labour market requirements. Furthermore, modern approaches take it for granted that vocational education schemes and programmes cannot be designed to correspond accurately to a particular job. The dynamics and changing demand of the labour market require more and more the replacement of physical skills by mental skills, and hence that such schemes and programmes be liberalised and broad-based, to promote adaptability, widen the scope of job opportunities, and enhance educational and occupational mobility. One of the major challenges that is still encountered by policy makers and planners of vocational education systems, in developing as well as developed countries, is the ability to operationalize the concept of integration, rather than just that of co-ordination and coexistence, of educational and work values and standards, and hence the integration of individual and societal needs, interests and objectives. The schism or separation between the education system and the world of work, which is found in particular in most developing countries, is one of the major weaknesses of vocational education systems in these countries.

In many countries, especially industrialised ones, the centre of gravity of vocational education systems is generally located nearer to societal and labour market needs, at the expense of educational values and individual needs. In many other countries, especially developing ones, the centre of gravity is located nearer to educational criteria and standards, at the expense of labour market needs and employment requirements.

In my address, three main vocational education issues will be explored, that are of special importance in general, and in developing countries in particular. These issues are: the economics of vocational education, the social status of vocational education, and the regional and international dimensions of vocational education.

The economics of vocational education

Three major factors have to be explored when the economics of vocational education systems are discussed. The first factor is concerned with the sources of finance and methods of funding; while the second factor is concerned with such matters as costs, efficiency and effectiveness, and hence with the socio-economic return on investment in vocational education. The third factor caters for the evaluation and assessment of the relevant systems and programmes.

The sources of finance and methods of funding of vocational education programmes vary considerably. Nevertheless, two such sources predominate: the first represents the taxpayers through central and/or local budgets, while the second source represents employers in industry and business, who are the main beneficiaries of the output of vocational education systems. Other sources with less impact include learners and trainees themselves and their families, in the case of fee-paying programmes; income generating activities; grants and donations, especially for such programmes as those directed to special groups, including the handicapped and the underprivileged. In most developing countries, public sources of finance for vocational education usually predominate. Public funding is in general utilised to finance school systems, and suffers usually from being inadequate, especially in countries with limited resources, where vocational education is not considered a priority in national budgets. A dynamic multi-faceted approach to the funding issue, with the objective of diversifying sources of finance, should be adopted in developing countries to ensure adequacy and sustainability of funding. Such an approach has yet to gain recognition and feasibility in such countries.

Matters related to cost, efficiency and effectiveness of vocational education schemes, which represent the second factor concerning the economics of such schemes, pose a big challenge in most developing countries. The relevant issues here include, on the planning or macro level, system choice or the school vs. the enterprise issue, the broad vs. the narrow base approach to the area of specialisation, and the duration of the vocational education programme. On the operational or micro level, such issues include trainee-instructor ratios, utilisation factors of training facilities, choice of equipment and technologies, and size and nature of productive activities.

Evaluation systems and techniques, which represent the third factor concerning the economics of vocational education, are far from being common practice in developing countries. To be effective, evaluation systems should incorporate three main elements. The first is internal evaluation, which is mainly concerned with assessing the degree of compatibility between the

outputs of the vocational education programme and the performance objectives specified for such programmes. The second element is the economic evaluation, which is basically concerned with such indicators as cost-benefit criteria, changes in learner's income, changes in productivity at the work place, comparative costing of different vocational education systems, and optimum utilisation of training facilities and services. The third element is external evaluation, which is generally concerned with assessing the degree of computability between the outputs of the vocational education programmes on the one hand, and labour market needs and employment requirements, on the other.

In developing countries, all aspects related to the economics of vocational education are sources of concern, and even frustration, especially when taking into consideration the relatively high cost of vocational education programmes, compared with other educational offerings.

Social status of vocational education

The social status of vocational education in any society is, to a great extent, a reflection of the status of work values in that society. Traditional cultures and philosophies range between two extremes regarding their assessment of work values. At one extreme, the ancient Greek culture viewed work as a low-grade life activity that, nevertheless, can't be dispensed with; while at the other extreme, the Marxist culture viewed work as the supreme value. Between these two extremes, different cultures vary to some extent in their assessment of work values. A rational and balanced approach can be realised if work activities are assessed both by their material and economic returns on the individual and society, on the one hand; and their social and humanising influences, on the other. Thus, vocational education systems and schemes should be designed as developmental life experiences that have their own social dimension and cultural extension. Vocational education, should do more than provide the learner with the specific skills and knowledge needed for the job. It should be acknowledged that occupations are more effectively performed by workers who are generally, as well as specifically prepared, taking into consideration the ongoing transformation of work processes, technologies and environments.

The social status of vocational education can, on the other hand, be enhanced in practice through appropriate career guidance and counselling services, as well as employment and placement services. Unfortunately, these two types of services are weak in most developing countries, accentuating more the status issues of vocational education. When such services exist, fully or partially, in developing or developed countries, it is not unusual for the providers of such services to fall in the trap of being guided more by labour market needs and employment priorities, than by the fulfilment of the individual's needs and inclinations, and the realisation of his potentialities. Proper career guidance and employment services should fulfil both labour market and individual needs, and should not end up by adjusting or even distorting the learner's inclinations to labour market requirements.

In practice, the social status of vocational education is also influenced, to a great extent, by the type of relation and nature of channels that link it with higher education that leads to the preparation of professionals. Successful vocational education schemes are usually designed with inherent and built-in links with higher educational and occupational levels, through the formal or non-formal systems of education, within the general concept of continuing and life-long education. In some education systems, especially those of developing countries, the realisation

of this concept would necessitate the restructuring and reform of higher education, in order to eliminate bottlenecks, and establish lateral and vertical channels among the various fields and levels of educational and training offerings, to promote occupational and educational mobility and, consequently social mobility. In general, therefore, higher education should be linked with the abilities and performance standards of the learner, irrespective of the type or stream of pre-university education or training he/she experienced.

Furthermore, the status of vocational education can be enhanced in practice through the establishment of a comprehensive and diversified network of non-formal and adult educational and training facilities and services which are accessible to the employed, as well as to the unemployed, to enable them move along and up the educational and professional ladder at any point or stage of their careers; thus fostering their personal development, enhancing their occupational and social mobility, and upgrading the quality and productivity of work sites. In most developing countries, such facilities and services suffer from two main shortcomings. First, they fall short of the minimum requirements needed to have an impact in such aspects as quantity, quality, geographical coverage, flexibility and accessibility. Secondly, such facilities and services seem to be utilised more by those who are already better educated and who can afford the costs involved. Thus, instead of acting as a means to compensate for earlier inequalities in educational and training opportunities, and as a vehicle to contribute to bridging the social and economic gap between the various groups of society, adult education facilities and services face the risk, in most developing countries, of widening the educational, occupational and social gap between the privileged and the underprivileged, between the haves and the have-nots.

Other aspects of the status issue of vocational education include such factors as the status of the vocational teacher, the gender issue, and the vocationalization of general education. It is not unusual in many education and training systems to find that vocational teachers are not of equal status, socially and economically, to their general education counterparts. It is also not unusual to find that the relevant vocational education facilities and services are structured basically around the needs of male learners, with the result that the role of females as learners, instructors, planners and providers of services, lags considerably behind the role of males. Finally, a great service can be offered to the status issue, if a strong element of vocational education, or more specifically prevocational education, is incorporated as part of general education in the form diversified practical activities and life experiences, derived from the various socio-economic sectors.

The regional and international dimensions of vocational education

The approach to issues related to human resources development in general, and vocational education in particular, is no more a purely national concern. For sometime now, it has been a regional concern; and now it is even becoming a concern with international dimensions that should take into consideration emerging conditions of increasingly globalized economies of the world, manifested by the changing structure and framework of world trade, labour mobility, common markets, commodity standards, multinationals, and the geographical characteristics of industrialisation. The economies of developed Western countries, as an example, are shifting away from the manufacturing sector to the services sector, with much of the manufacturing activities moving to less developed countries in Asia and Latin America, attracted by reduced production costs.

It is thus becoming increasingly essential to think regionally and even globally when planning, defining policies and designing programmes at the national level, for the quantitative and qualitative aspects of vocational education as a component of human resources development, especially in such matters as job classification, skill standards, educational levels, information systems and the identification of training needs.

We talk freely of the regional and international dimensions of vocational education at the macro level, but we seem to be timid and shy in the face of some of the issues at the micro level. Take for example the two concepts of vocational education and vocational training.

We frequently come across, or use, these two terms, sometimes to mean different things and sometimes to mean the same thing. The split and schism between Vocational Education and Vocational Training is believed to be artificial in modern vocational schemes and programmes. The fact that the split still exists is due probably to past prejudices and administrative structures. So, nothing short of the full integration of the implications and contents of the two terms is acceptable now.

The split might have been justified decades ago when it was usual for workers to acquire the skills needed for their jobs purely through traditional time-serving informal apprenticeship schemes, consisting predominantly of on-the-job practical experiences. This is no more the case now. Jobs are classified according to two main variables: the field of specialisation and the occupational level. The content of any vocational preparation programme for a job is analysed into its constituent functions, duties and skills, specifying the theoretical content and knowledge needed. Thus the needs and requirements of the job dictate the structure and content of the vocational programme, whether it is called vocational education or vocational training. The fact that the vocational programme is implemented in an educational institution or within a work environment in an enterprise should not affect the basic structure and content of the programme, simply because the needs and requirements of the job are independent of the venue that is utilised for the implementation of the preparation programme. The schism between Vocational Education and Vocational Training can be ended, and the barriers demolished if vocational programmes are structured around the needs of the job and the needs of the learner, irrespective of the venue of implementation, or the agency responsible for its financing or administration.

The two most renowned international agencies in the field of vocational education and training, UNESCO and ILO, need to address this issue seriously, so that we stop talking different things about what should be the same thing, and stop insisting that UNESCO's role is vocational education, while ILO's role is vocational training. This is not role splitting, but rather hair splitting!

It is worthwhile mentioning here in this context that, because UNESCO and ILO communicate with member countries through different channels and national agencies, two systems of human power preparation at the basic occupational levels emerge sometimes side by side with little or no co-ordination, and sometimes with rivalry and mistrust.

To conclude, the regional and global dimensions of vocational education cannot be properly explored without investigating their cultural reflections and outreaches, especially that globalisation is a trend that is permeating all aspects of life: economic, social and cultural. This would obviously present another challenge to planners of vocational education systems, and

would justify more the broad-based human approach to vocational education programmes to complement the professional and specialised approach.

What is really needed in our education systems is, more and more, the liberalisation of vocational education and the vocationalisation of general education.

The Changing Demands of the 21st Century: Challenges to Technical and Vocational Education

Hermann Schmidt
Former President
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Germany

1. Thinking the change – a challenge for vocational education

When the winds of change blow, some build walls, others build windmills. (Chinese wisdom)

China in its long history has shown to the world that both options can be a successful and sustainable response to change. In our present situation, on the eve of the 21st century, however, building walls will definitely not be an adequate response to the challenges we face in education. Let us build windmills!

There are three pivotal developments of the past 20 years that have caused most of the change:

- **micro-processor technology** and its impact on information, communication, production, and work organisation; biotechnology and genetic technology;
- **the end of the cold war** and the division of the world into blocs of capitalism and communism; and
- **growing ecological consciousness.**

Technology

Information technology (IT) is at the root of a process of transformation in the course of which industrialised societies are changing into **knowledge societies** and the management of production into the management of knowledge. There will be less and less manual work while computers become the main tools catering for the information needs of all professions. As a result, letters and figures, into which all procedures have to be translated, become more and more important for all human activities at work and in private life.

A less divided world

The end of the division of the world has opened the borders to the free flow of capital, goods and information and to the unhindered travel of people at large, but not yet in all parts of the world. Going global is the challenge to entrepreneurs and, of course, to their employees. As an example, cross-border activities in a united Europe demand the same competencies in all

participating countries, i.e. **language and more knowledge about partner countries, their economy, culture and their legal and social systems.**

Ecology

Growing ecological consciousness will become a very important economic factor in the foreseeable future. **Eco-knowledge** is an important part of it, but **eco-thinking** is even more important. It **has to be part of all education**, general and vocational.

Curriculum revisions, new syllabuses or educational reforms cannot master all these changes. What we need are new ways of thinking. To master the changes in thinking about the needs of our world seems to me the most difficult task of education.

Labour-management relations

As the value imperative to remain competitive has become more demanding, so there has been a corresponding increase in the capability expectations of the workforce.

There is a point in this development where **a new balance in responsibility in the partnership between management and the workforce** now tilts more towards the workforce than prevailed in the past. This is not the result of a power struggle but the consequence of inevitable changes in the organisation of work. In several European countries these changes are also reflected in government policies and ultimately in what is expected of VET. Tri-partite bodies are responsible for VET-Standard development and implementation in many countries of the world. Thus, the ability of employers and trade unions to describe rather exactly what their needs are concerning the role and the competence profile of future skilled workers and employees has been developed and improved. The communication between the world of work and the world of education, which very often seems to be non-existent, has grown into a new culture within research institutes or employment offices where these tripartite bodies meet regularly.

2. Education against uncertainty and anxiety

One of the most **dangerous consequences of fundamental changes** now prevailing in politics and, of course, in education is uncertainty and following this – **anxiety**. In Eastern Europe, where nearly all established frameworks and structures have fallen apart, uncertainty and anxiety are probably the prime reasons for the failure of leadership, but also in western industrialised countries on their way into knowledge societies, some of them with particularly high unemployment rates, as well as in Asian countries which are shaken by a threatening economic crisis or in Africa and South-America uncertainty and anxiety are well known companions for a majority of people.

Therefore, it is one of the most important tasks of education to enable people to cope successfully with uncertainty through:

- **information and knowledge** about the reasons for the changes, including systems' knowledge (e.g. computer systems, banking systems, free-market systems);

- skills on how to gather and **select information and knowledge**, and how to use them in planning and decision-making processes;
- **problem-solving and practical skills, social and team skills;**
- **entrepreneurial skills;** and
- **The development of the learner's personality** through general, vocational and professional education.

What education can do is to create the preconditions of change, to develop the potential for managing change and to foster positive thinking. What it cannot do is to **provide employment** for those who have been educated and trained, to secure parity of esteem and a balance between the haves and the have-nots within a country and amongst global players.

If education shall act successfully in this very important field, educators need the help of the whole society, not only parents. The corporate world and the trade unions have a responsibility for co-operation with the world of education for their own sake.

What contribution can **education** make **to globalisation**? A simple answer would be: **tolerance and democratic convictions!** Yet, in our world, war is still seen as the ultimate act of politics. A main task of education, including vocational education and training, must surely be to maintain the freedom to hold diverse opinions regardless of political, religious and philosophical boundaries.

3. The overall objective – learning to learn

In the information driven world of work:

- **computers are the common tool** for managers as well as for front line workers;
- **all information is being digitised** and transformed into computer-compatible **letters and figures;**
- the Internet is established as a world-wide information web, using **English as the lingua franca** of the knowledge age.

As a consequence, mathematics, one's own language and English are becoming more important for vocational education and training than many of the practical skills that have traditionally been related to specialised training. Initial vocational education and training pursue in their turn the kind of educational objectives that have traditionally been the prerogative of general education. They include:

- **learning to learn** (on the job; integrating theory with practice; learning by reviewing practice; applying learning methods in practice; developing social capabilities that cannot be taught); and
- **becoming a mature and responsible contributor** (acquiring overarching capabilities like acting in a group, thinking in process terms, taking responsibility for others and for one's own achievement).

The traditional boundaries between general and vocational education on the one hand and education and training on the other have become obstacles to learning for real life.

There is no one-way-road of learning transfer from the so-called industrialised countries to the so-called developing world. Those who believe that they already know the problems of tomorrow have already lost the learning competition.

4. The young must shape the change

There is a widely shared consensus about the goals of education. It is **to prepare young people for life** by developing their intellect, their aptitudes and their talents; and to create opportunities for them to reach their full potential. But education should also enable them to earn their own living and take part in the democratic process. **All educational systems have to serve these purposes.**

Vocational education, i.e. the education and training of skilled workers and employees, has to be broader and more diversified. Take for example:

- **a car mechanic** must have diagnostic skills and knowledge (computer literacy), be customer oriented (direct personal contact), have all the skills of the trade (high tech), must take into account the ecological effects of his/her work, be able to calculate the cost of a repair and, more generally, be conscious of adding value;
- **a farmer or horticulturist** must be knowledgeable in biology, chemistry, management, marketing, engineering (mechanical) and have customer orientation; he/she must be able to find and exploit niches in the market (e.g. value added products for hotels in the neighbourhood);
- **a worker in one of the growing service industries** e.g. in the tourist, hospitality or leisure industry can be a well educated and trained leisure manager with a broad cultural background and communication skills; and
- **a health care assistant** in one of the broadest fields of services where people of all ages can perform full time or part-time services once they have access to adequate education and training.

The key to success in vocational education is to **create learning opportunities** through which people can develop their ability to learn autonomously and use what they have learned to make a difference in their workplace.

In Germany, government, employers and trade unions agreed in 1987 that all occupational VET-standards should include the new overall objective which changed the former VET-paradigm: **A skilled worker/employee should be able to act independently in planning, executing and controlling his/her work task.**

All new learning activities following this new paradigm have one characteristic in common: **the learner steps into the centre of the learning process**, gathers information and, as far as possible, acts independently. The teacher/trainer also changes his/her role to become coach, advisor and tutor.

5. New vocational education and training standards – a global movement

The changes in technology, business, politics and society, all make it necessary to re-examine the aims, contents, qualifications and methods of all educational systems. Will they help or hinder future developments? All over the world VET-standards are benchmarked, newly developed or revised. The setting of new educational standards is more than just another reform, it has become a movement. This new movement has been well described by our colleagues Marc Tucker and Judy Coddling in their book **Standards for our Schools** (San Francisco, 1998).

The countries of Central and Eastern Europe and those that formed the former Soviet Union, the so-called “countries in transition” are confronted with the most radical change that educational systems have ever had to endure, especially in such a short time. With the change in the overall philosophy from centralised planning to free markets, these countries have to build new vocational education systems and transform all occupational and professional standards and curricula. This endeavour needs solidarity and support.

The European Training Foundation (ETF) based in Turin, Italy was founded in 1994 to support the Central and Eastern European countries to restructure their vocational education and training (VET) systems. ETF’s Advisory Forum embraces the member states of the EU and the countries of the former Eastern Bloc and – as of 1999 - the Mediterranean countries of Africa and the Near East (MEDA-Programme 1999) as well as international institutions like CEDEFOP, the EU’s VET-centre, UNESCO, ILO, the World Bank and European Employer and Trade Union Associations. The task of the Forum is to discuss the needs of the countries in transition in the field of VET and advise the ETF Directorate and its Governing Board by defining adequate measures of support in its programme planning.

ETF responded to the different needs of partner states in Central and Eastern Europe (including the new independent Asian countries, that were part of the former USSR and Mongolia) by:

- establishing information agencies, so-called **observatories**, which provide data about the preconditions for defining VET Standards and labour market needs;
- creating an **expert network** to support partner states in developing and implementing VET Standards; a working group of the Advisory Forum was given this task;
- launching and monitoring **pilot projects in partner countries**;
- providing **tailor made advice** for partner countries which start to develop VET-standards for the first time; and
- implementing an **information network** between partner countries and EU-member states.

It is such a **VET-Broker /Agency /Network** which is needed for the world-wide promotion of education and training. Thanks to UNESCO and the German Government an international centre for technical and vocational education and training has been proposed to be established in Bonn/Germany.

Common to all these developments in search for new vocational training systems, standards, parity of esteem and closer links between education and business is the need for **vocational education research**. The European Union is focussing on this very important factor in its vocational education promotion programmes in order to improve the data base for future oriented VET-planning processes, to better link learning in schools and at the workplace, to help teachers in coping with the large amount of new knowledge, new skills and new methods of teaching with the support of multimedia and setting new VET-standards. Vocational education research and development could also be a key **to innovative measures to make better use of informal learning achievements** for young and adult with little formal education.

There is a strong global move for building windmills but it will take a lot more creativity and investment in education than we have done so far to turn the vision **education and training for all** into reality.

Reform and Innovation of Technical and Vocational Education in the Republic of Korea

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The strong performance of the economy in the Republic of Korea during the last thirty years has been well publicized. Technical and vocational education played a pivotal role in this rapid industrialization process. The government successfully restructured the vocational education and training system to meet the changing industrial demands. However, the country now faces new challenges posed by the changing global economic environment. In order to sustain its competitiveness, the Republic of Korea must now take active measures to reform its technical and vocational education programmes.

This paper examines the restructuring of technical and vocational education in the Republic of Korea to provide industrial manpower during the process of economic development. Firstly, the current system of vocational education and training will be described. Secondly, how the system has been restructured in response to meet industrial demands will be reviewed. And finally, it will list the challenges that the Republic of Korea will face in the twenty-first century and some policy recommendations will be made that may be considered in order to respond to the emerging challenges.

THE CURRENT SYSTEM OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

In the Republic of Korea, technical and vocational education programmes within the formal education system are provided at both senior secondary schools and post-secondary institutions (junior colleges). Out-of-school vocational training is provided as non-formal education.

Vocational senior secondary schools provide three-year programmes, preceded by six years of primary education and three years of junior secondary education. The programmes can be divided into six categories: agricultural, technical, commercial, marine and fisheries, vocational and comprehensive. The duration of field training varies, ranging from one to six months in agricultural and commercial schools, one to twelve months in technical schools and from three to twelve months in fishery and marine schools. Vocational senior secondary schools are the major institutions for training the craftsmen and skilled manpower in the Republic of Korea. In 1997 there were 771 technical and vocational senior secondary schools with a total enrollment of 960,037, which accounted for about 40 per cent of the total senior secondary school enrolment.

Junior vocational colleges provide two-year post-secondary programmes, with the exception of the marine and fisheries, and nursing courses which last two-and-a-half years and three years respectively. The purpose of junior college education is to produce middle-level

technicians equipped with a solid base of theoretical knowledge and practical skills to meet the increasing demand for technical manpower following rapid industrialization. Specialized programmes are grouped into technical, agricultural, nursing, fisheries, health, commercial and business, home economics and so on. In 1997 there were 155 junior colleges with an enrolment of 724,741, about 28 percent of the total higher education enrolment.

Non-formal vocational training comprises public and private training. Public vocational training is undertaken by the Korea Manpower Agency (KOMA) under the Ministry of Labour and local governments. It aims to train semi-skilled and skilled workers through programmes lasting from three months to two years. KOMA manages institutes concerned with a broad range of occupations, while local governments concentrate on training in trades necessary for increasing the income of farm households.

Private vocational training is conducted by enterprises and corporations. Enterprises are required to pay employment insurance fees, the latter depending on the number of employees. The fees paid by the enterprises are pooled into a central fund, known as *employment insurance funds*, that are used to finance the vocational competency development programmes. The vocational competency development scheme, which came into effect in January 1999, replaced the compulsory training levy system. Private training is also carried out by corporations authorized by the Ministry of Labour.

The duration of vocational training programmes vary, ranging from short-term (hours, days, weeks) to long-term (six months to two years). The vocational training courses are divided into 'basic training', 'upgrade training', 'job transfer training', and 'retraining,' according to the objective of the training. The programmes are provided in 477 fields covering 23 technical areas. In 1997, 477 training institutes (96 public and 381 private) provided training for 302,646 trainees.

RESTRUCTURING OF THE TECHNICAL AND VOCATIONAL EDUCATION SYSTEM

In the early 1960s, the Republic of Korea was a typical labour-surplus economy with a modest endowment of natural resources and a small domestic market. The government established a vast economic development plan and restructured the vocational education and training system in order to supply the manpower necessary to implement the plan. As a result, most of the formal technical and vocational education was provided within the state education system, and was systematically planned and standardized. The government rapidly expanded enrolment in vocational schools in the 1960s. However, the formal vocational schools were not able to prepare sufficient technical manpower for the rapidly industrializing country. In order to train enough workers to meet the increasing industrial demands, the government enacted the Vocational Training Law in 1967 as a result of which many new vocational training institutes were established.

During the 1970s, the government undertook a fundamental structural change towards the development of heavy-chemical industries. This rapid structural change heightened the industrial demand for skilled workers and craftsmen. To meet this requirement, the government strengthened technical and vocational education at the secondary level, expanded the number of public vocational training institutes and legally mandated in-plant vocational training in most private enterprises.

The government encouraged private companies to provide in-plant training with the enactment of the Basic Law for Vocational Training in 1976. Large companies in certain industries were required to provide in-plant training for a certain number of their employees. These companies were obliged to pay a training levy if they did not provide in-plant training, or if their training did not meet government regulations. This mandate applied initially to firms with more than 500 employees; in 1991, this number was decreased to 150 employees, and in 1995 - to 100 employees in the manufacturing sector.

In parallel with the rapid structural changes to heavy and chemical industries during the 1970s, the government re-organized the existing five-year junior technical colleges (comprising three years of secondary and two years of post-secondary education) into two-year junior vocational colleges directed toward the preparation of technicians and engineers who are able to perform specific technical tasks in the heavy and chemical industrial fields.

In 1973, the government implemented the National Technical Qualification Testing (NTQT) system to improve the quality of skilled manpower and to enhance the socio-economic status of skilled technical workers. The system successfully encouraged students and employees to acquire higher technical and vocational skills, thereby effectively increasing the efficiency of the workforce. The Korea Manpower Agency and the Korea Chamber of Commerce and Industry (KCCI) were commissioned to carry out the National Qualification Testing. By the end of 1996, a total of 4,905,329 trainees had acquired national technical qualifications.

In the 1980s, the government expanded the opportunities for higher education to meet social demand, mainly for political reasons. The government strengthened the junior college education and established open universities to provide continuing education for the employed. Thus, enrolment in junior vocational colleges increased while enrolment in vocational senior secondary schools and the number of in-plant trainees began to decline. This resulted in a shortage of workers for production jobs, especially in the small and medium size companies.

In the 1990s, the economy is facing new challenges posed by the changing economic environment including the globalization of trade and labour markets, the rapid advancement of new technologies and more competition. Despite the expansion of higher education in the past decade, the present level of education and training is unable to meet today's industrial demands. The government has recently introduced various measures to strengthen the vocational education and training system in order to prepare the necessary skilled manpower to meet the changing industrial demands while reducing the pressure on higher education.

In 1990, the government began implementing certain policies to increase the enrolment in vocational senior secondary schools, to increase the enrolment ratio of general versus vocational senior secondary schools from 68:32 to 50:50 by 1995. Although the scheme contributed to increasing the enrolment in vocational senior secondary schools from 32 per cent of the total senior secondary school enrolment in 1990 to 39 per cent in 1995, the scheme failed to induce

students away from higher education and to supply the necessary manpower required by the industries.

To strengthen the links between schools and industry, especially in the areas of technical education and training, a new system named “the Two-plus-one Program” was introduced in 1994 and was implemented in forty designated model schools in 1998. The programme comprises two years of vocational education in schools, followed by one year of practical ‘hands-on’ field training in industrial companies. From 1999, the implementation of this system has been left to the discretion of technical senior secondary schools.

Beginning in 1994, the Presidential Commission for Educational Reform (PCER) examined the effectiveness of the policies to expand enrolment figures for vocational senior secondary schools and to encourage close industry-school linkages. By the end of 1995, it was concluded that some of the earlier policy measures were inappropriate. PCER recommended certain changes in the policies, placing emphasis on quantitative expansion of vocational senior secondary school enrolment to that of placing more emphasis on the quality improvement of vocational education.

PCER proposed the Second Educational Reform Programme including the vocational education reform in 1996. Reflecting recent trends in higher education, the objective of the vocational education reform is to establish a ‘Lifelong Vocational Education System’. In order to achieve this goal, legislation on the credit bank system in 1996 was enacted, allowing part-time registration to college on a test base system. In addition, students in vocational senior secondary schools and workers in industry are able to continue further education. These students have priority in the selection process for entry in colleges in related fields of study.

With the introduction of a lifelong education system, the junior college education was expanded. Between 1979 and 1997, the enrolment in junior colleges increased 11 times and the programmes were diversified, from 91 into 361. Based on the Educational Reform Programme, the *customized training system* responding to industrial demands has been implemented in two model junior colleges since 1996 and plans are underway to expand the programme. In order to strengthen the junior colleges’ capacity for vocational education, programmes linking the curriculum of the second and third years of vocational senior secondary schools with that of the vocational college (2+2) are being implemented in some pilot schools. Students who have completed vocational senior secondary school courses are given priority in the selection process for entry into colleges in related fields of study. From 1996, the graduates of junior colleges receive associate degrees.

As the required production skills became increasingly sophisticated with the manufacturing of higher value-added products in the late 1980s, companies began to emphasize skills upgrading for their workers while placing less emphasis on the initial training for trainees prior to employment. Even though the compulsory training levy system contributed to the early increase of in-plant training, it failed to encourage companies to invest in the further education and training of their workers. To encourage enterprises to provide further training of those in employment, the government has introduced the vocational competency development scheme with the enactment of the Vocational Training Promotion Act in 1999. All companies with more than fifty employees are required to provide vocational competency development programmes for their employees and for job seekers.

Since the latter part of 1997, the Republic of Korea has been suffering from ever-

increasing unemployment. The unemployment rate reached 8.0 percent in September 1998 as compared to 2.6 percent in 1997. Unemployment is expected to increase in 1999 due to the severe economic downturn, recent bankruptcies, and downsizing of many companies. Since the onset of the severe economic difficulties, the government has set up special training programmes for the unemployed as a social relief strategy. In July 1998, 3,079 training programmes were offered in 994 institutions.

CHALLENGES IN THE TWENTY-FIRST CENTURY AND FUTURE STRATEGIES

The trends of globalization of trade and labour markets, rapidly changing technologies, and mass unemployment resulting from the recent economic crisis, are expected to continue in the twenty-first century. This trend will foster rapidly paced changes in future industrial structures and employment patterns.

The effect on and changes in the labour market are that some jobs are declining in significance, others growing in importance and others still require completely new or different skills. The size of the workforce employed in the service and technology industries, where a high-level education and skills are required, will increase; while the demand for low-skilled workers will shrink. Many employees are likely to change jobs, and possibly even careers, several times during their working lives. The changing nature of labour market trends has significant implications for education, implying *inter alia* the need to provide lifelong learning, continuing and recurrent technical and vocational education, and continued upgrading of knowledge and skills.

In an effort to respond to the emerging challenges in the twenty-first century, the government will continue to implement current reforms. The following are measures and policy recommendations to be considered:

- i) The common school curriculum should be revised to emphasize basic education rather than specialized education. *Core competencies* required for students should be identified and integrated into the Basic Common Curriculum from the first to the tenth grade, as proposed in the Seventh Curriculum which will be effective from the year 2000. Constant improvements in the area of knowledge and skills prove imperative for the future workforce to acquire the basis for developing further knowledge and skills as quickly and effectively as possible. This demands an adequate general knowledge level in order to facilitate the development of knowledge in related areas, that is, a core of "generic knowledge".
- ii) *Integration of the senior secondary school curriculum.* Senior secondary schools willing to do so can integrate and manage the curricula of both vocational and general schools in order to enable students to choose from a wide selection of courses during the second and third year. This will enable students to satisfy requirements for further education while at the same time acquiring work-related knowledge and skills that will help them to enter the workforce. Schools that integrate and manage both curricula will minimize the number of compulsory courses which students must take and will increase the number of elective subjects.
- iii) *Lifelong education* at different levels should be expanded to benefit each and every citizen. The educational trend has shifted so that more and more students are opting to

undertake further study beyond that of senior secondary school. Higher education institutes such as polytechnic universities, polytechnic colleges and junior colleges should therefore be strengthened and equipped as lifelong educational institutions allowing people of all ages to receive further occupational education. Flexible access to vocational education and training throughout life should be ensured.

- iv) *A School-to-work transition (STWT) system* must be developed. STWT should begin in the earliest years of schooling, combining efforts in educational improvement, workforce development and economic development. The goal of STWT is to smooth the transition process for all students, including college-bound and non-college-bound youth, disadvantaged youth and out-of-school youth. The system seeks to find a balance in preparing students for “real jobs” without limiting their employment and school opportunities. The components of the system are:
 - (a) work-based learning;
 - (b) school-based learning;
 - (c) connecting activities which articulate between the school-based and work-based components; and
 - (d) career-awareness programmes.

- v) *Enterprise training* should be encouraged. Companies, particularly those which invested in technology-intensive industries, require a continuous updating of skills and knowledge for which formal schools are inadequately prepared. Companies provide the best setting for workers to acquire the work-related knowledge and skills necessary to absorb future technology speedily. Enterprises have to become “places of learning” in addition to being places of work. Training policies should encourage enterprises to provide further training of their employees.

UNESCO's Programme on Technical and Vocational Education For the First Decade of the New Millennium

Colin N Power
Deputy Director-General for Education
UNESCO

**Mr Chairperson,
Distinguished Participants and Observers,
Ladies and Gentlemen,**

The deliberations during the last three days have brought to us the realization that the growing economic globalization has created a new international agenda for development. The world is moving towards an information-based economy where the effectiveness of an enterprise or a country is determined by the quality of its products and services. Production systems based on new technologies that enable greater productivity and flexibility demand that all workers constantly must update their skills and become more entrepreneurial. The evidence clearly shows that the most productive nations are those characterised by a flexible and well-qualified labour market, one with a rich and diverse mix of skills which are continuously updated and developed throughout life. Thus, the theme of our Congress: *lifelong learning and training for all, a bridge to the future*.

As we have heard during these discussions, technical and vocational education and training (TVET) is most directly concerned with the acquisition of the knowledge and skills required for the world of work, formal and informal, urban and rural. And every country must adapt its TVET programme to cater to the skill requirements of its workplace of the twenty-first century. We have seen that these skills requirements may vary considerably according to the stage of socio-economic development of each country. Nevertheless, it has been clearly demonstrated that every country, regardless of its state of development, is compelled to re-design its national TVET programme if it is to address effectively the employment and development issues of the next century. As the recent Asian experience shows, the economic situation can change dramatically suddenly, creating massive problems of unemployment and forcing many young people to opt for self-employment in the future. Thus the need to develop more coherent education, training and employment policies, and to find ways to co-ordinate the work of Ministers of Education, Labour and Social Welfare.

Yet again, a major international forum has stressed that the current international developmental paradigm cannot continue indefinitely because of its adverse impact on the environment, on education and the social sector. You have stated that a sustainable development paradigm must be arrived at and that the TVET of the future must not only prepare individuals for employment in the information society, but also make them responsible citizens who give due consideration to preserving the integrity of their environment and the welfare of others. You have stressed the need for TVET programmes to be not only "demand driven", but

also “developmental need driven”. Here development includes all social, economic, personal and environmental aspects.

You have also expressed the view that vocational education must commence during the period of general education in order to expose children to a range of applied life skills and experiences. Above all, TVET programmes must be delivered in a flexible manner so that they are accessible to all social groups and to all age groups. In other words, we need to provide lifelong learning opportunities for all. You have pointed out quite often that providing basic learning opportunities to the marginalised youth excluded from the formal education system is a challenging task for many developing countries. TVET can, without doubt, serve as a possible channel for educating marginalized youth by mobilizing them to learn while they work in small and medium-sized industries.

Ladies and Gentlemen,

You have stressed that many of the developing countries lack the technical and financial resources to redesign their TVET programmes. Unfortunately, we have also witnessed in recent years a significant decline in development co-operation funds provided by the industrialised countries and funding agencies. We have heard your call for vastly increased multilateral and bilateral development co-operation for TVET. In today's inter-dependent world, it is undoubtedly in the interests of the industrialised countries to provide tangible support to the efforts being made by developing countries to develop their human resources and to break the vicious cycle of poverty, inequity, unemployment, violence. As you have said, unemployment is now an international problem, one which cannot be contained within national boundaries.

We strongly believe that provision of technical and vocational education and training aiming to prepare qualified technicians and skilled and semi-skilled workers should be an essential component of the development agenda of all countries. TVET is a bridge to the future, but there must be an employment road to which it leads, otherwise we create further problems. Thus we need not just a revitalised and more coherent TVET programme, but a new vision for TVET and employment – we need new models of TVETE, linking education, training, employment and social welfare, nationally and internationally.

On the occasion of this Congress, UNESCO would like to call upon all international organisations with an interest in technical and vocational education and training to join our efforts in serving the needs of all countries, particularly the developing nations, in reforming their TVET systems. We should share our expertise and take concrete joint actions to prepare their workforces for the challenges of the twenty-first century. A co-ordinated strategy should be adopted so that synergistic results may be obtained from the resources and effort invested. In this connection, the *Convention on Technical and Vocational Education* adopted by the General Conference of UNESCO in 1989 may be utilized as a valuable reference for developing the framework of such joint endeavours.

On the basis of the recommendations formulated during a number of regional and sub-regional preparatory conferences prior to this Congress and the discussions during the last three days, we are about to draft a plan of action for the development of the field of TVET during the next ten years. Complementary to this plan of action will be UNESCO's future strategy and activities in TVET, and links with training and thus with the ILO.

I should like to outline the proposed main objectives in UNESCO's future strategy. This set of objectives is by no means intended to be conclusive and exhaustive. They only reflect the priorities that we consider to be within UNESCO's mandates and fields of competence.

Objective 1 Strengthening TVET as an integral component of lifelong learning

In an era characterised by the challenge of globalisation, rapid technological changes and economic uncertainty, it is imperative that all stakeholders work together to develop legislation and policies, establish institutional structures and redesign curricula to ensure that TVET caters adequately to the varied needs of all members of society to enter and re-enter the world of work. For this purpose, continuous TVET opportunities should be provided for achieving both personal and social development. UNESCO's activities therefore should aim at:

- Including vocational subjects in general education curricula to facilitate the young generation to obtain generic technological knowledge and key pre-vocational skills - making TVET for all an integral part of national educational policy;
- Developing the articulation between technical and vocational education on the one hand, and other sectors of education on the other, emphasising the recognition of prior learning and work experience, and raising the status of TVET in education systems;
- Promoting co-ordination between formal education and informal training systems, ministries responsible for education, training, labour and social welfare;
- Fostering the involvement of all stakeholders, particularly private sectors, in the provision of TVETE and improving the link and co-operation with the world of work.

Objective 2 Orientating TVET for sustainable development

TVET can play an instrumental role in developing a new generation of individuals who will face the challenge of achieving sustainable socio-economic development. A number of new subjects (issues) therefore need to be incorporated into TVET teaching and learning or be further emphasised for the sake of the future of all of us as we struggle to learn throughout life. A well-trained technical workforce is essential for any country's efforts to achieve sustainable development. Thus, UNESCO's activities should aim at:

- Ensuring that TVET is an integral part of every nation's development agenda, and a valued and integral part of its education and human resource development strategy;
- Including environmental issues in all TVET curricula with the objective of promoting the concept of sustainable development;
- Emphasising the acquisition of entrepreneurial skills, creativity, team and communication skills as part of TVET;
- Introducing and applying the new information and communication technologies in the TVET teaching and learning process without losing valuable aspects of traditional teaching methods;

- Paying special attention to providing training for the tourism and hospitality industries which are a potential avenue towards employment creation and economic growth in the developing world.

Objective 3 Providing TVET for all

Besides preparing people for the world of work, TVET is also expected to be an instrument for social cohesion and integration. The general access to and availability of TVET and the right to work are closely inter-linked issues. UNESCO will therefore assist Member States in their efforts to make TVET programmes comprehensive and adequately inclusive in order to accommodate the needs of all learners. UNESCO's activities in this respect should aim at:

- Promoting special initiatives and efforts to ensure equal access to TVET for girls and women, and to eliminate the very strong historic gender bias against women which has for too long characterised TVET policy and practice;
- Making TVET programmes, both formal and informal, available to the unemployed and various marginalised groups including early school leavers, the disabled, the rural poor, displaced persons and demobilised soldiers in post-conflict situations, contributing to the UN effort to alleviate poverty;
- Re-orienting vocational guidance and counselling to reach out to all members of society;
- Promoting flexible access to lifelong learning and training.

Ladies and Gentlemen:

To meet the major challenges posed by the requirement for human resources development, UNESCO's Member States have petitioned the Organization to up-grade its activities in TVET, and to provide them with more effective assistance in this field. UNESCO plans to launch an International Programme on Technical and Vocational Education from the beginning of the 2000-2001 biennium to meet such a demand. The following is a proposed framework of this Programme. After this Congress, the objectives and the framework will be modified in accordance with your comments and suggestions. A document on the proposal of this new Programme will then be submitted to the 30th session of UNESCO's General Conference in November 1999 for approval.

The Programme actions will be designed and implemented through the following modalities:

A Improving Member States' policy making capacity

The following actions will be planned to assist Member States' efforts in formulating relevant policies for the development of TVET as a component of national development agenda:

- Providing national decision-makers with comparative and analytical information on national policies for reforming TVET systems, best practices of TVET delivery models and research findings in various Member States;
- Conducting international, regional and sub-regional meetings for policy-makers, professionals and researchers to exchange views, experiences, TVET curricula and teaching packages and ideas;
- Identifying the factors that determine the quality and pertinence of TVET with a view to improving its status and attractiveness in education systems;
- In co-operation with Member States, rationalising and refining the collection of national statistics relating to TVET and developing indicators to facilitate decision making, planning and assessment at the national and international level;
- Providing information and assistance to Member States on formulating the national legislative framework for TVET.

B Assisting Member States' institutional capacity building

The following actions will be planned to strengthen TVET institutions' capacities in research, development and training:

- Supporting regional activities and providing guidelines to Member States on the preparation of TVET teaching and training personnel;
- Assisting Member States in using information/communication technologies as a tool for teaching and learning both in direct contact and in distance learning mode;
- Compiling an annotated inventory of existing methodologies, instruments and tools for the development of TVET systems and various delivery patterns;
- Implementing projects for developing sample modular materials and interactive learning packages for Internet & Intranet use.

C Enhancing international co-operation

Actions to promote international co-operation in TVET will emphasise North-South and South-South exchanges, as well as co-operation among countries with similar problems. This will also include efforts to strengthen the capacity for international communication of UNEVOC centres in less privileged communication environments, particularly in the least developed countries, in small States and in some parts of Africa:

- Collecting and disseminating information on curricular competencies in order to enhance the uniformity and portability of vocational skills, competencies and credentials among countries and regions;
- Strengthening the existing UNEVOC network and improving the capacity of national UNEVOC centres as both centres of information and action;

- Establishing close co-operation with other UN agencies, donor agencies, development banks and NGOs active in TVET, generating an alliance (as for EFA) in support of TVET and the new vision generated by the Seoul Congress;
- Advocacy in support of TVET as an integral part of the development agenda of bilateral and multilateral donors and financial institutions, promoting debt swaps and debt relief for education and training and respect for national human development priorities;
- Matchmaking among national projects, donor agencies and relevant NGOs;
- Initiating international events that would draw public attention to TVET.

Ladies and Gentlemen,

Please allow me to describe briefly the proposed structure for the implementation of UNESCO's International Programme on Technical and Vocational Education:

UNESCO will seek to forge an international alliance in support of TVET. In particular, we expect to forge a common policy with the ILO for the joint development and execution of policies and programmes aimed at the alleviation of poverty and the strengthening of links among education, training and employment, but drawing in other partners such as the World Bank, the European Training Foundation, SEAMEO, KRIVET, CINTERFOR, to name a few.

UNESCO with the help of several key bilateral donors (e.g. BMZ, USAID), partners like KRIVET and UNEVOC Centres in Australia, Greece, Brazil, Korea, United Arab Emirates and elsewhere will support its UNEVOC Network and will provide tangible support to its 190 national centres, sponsoring fellowships and exchanges aimed at promoting national capacity-building and international co-operation for the renewal of TVET.

The overall planning and monitoring of UNESCO's long term Programme on Technical and Vocational Education will be the responsibility of the Secretariat at UNESCO Headquarters, and will promote co-operation with other international partners. Particular attention will be paid to enhancing co-operation and promoting activities at regional and sub-regional levels. The major UNESCO field offices in Bangkok, Beirut, Dakar and Santiago and the regional networks of educational innovation for development shall continue to play the key role in the implementation of the recommendations of the Seoul Congress.

UNESCO, with the collaboration of ILO, will launch a one-stop website on the Internet dedicated to supporting TVET, to be known as the "TVET Implementation Centre". It will place online critical information and guidelines, examples of best practices, etc. with guided search and assist features, to cater for users of different levels in Member States. It will carry extensive references and links to resources at other sites, generating greater development and use of these. This "implementation tool" will increase the efficacy of missions and consultancies, which must continue.

With a generous offer made by the Government of Germany, the establishment of an International Centre for Technical and Vocational Education in Bonn has been proposed. This Centre is expected to be the technical backbone supporting the international UNEVOC network and strengthening the capacity of national UNEVOC centres by providing a) clearing-house service, i.e. providing information, conducting research and studies; and b) training of personnel

from national UNEVOC centres. [The TVET Implementation website will also be located here.](#) I would like to express, once again, UNESCO's appreciation to the Government of Germany for their continuous support to UNESCO's activities in the field of technical and vocational education.

Within the framework of this international network, a number of regional centres shall be established with UNESCO's support, in order to facilitate the networking and programme activities implemented at the regional and/or sub-regional levels. Several Member States (including Australia, Brazil, Pakistan, Republic of Korea, the Russian Federation, etc) have already proposed to host such regional centres. In accordance with the specific strengths of these centres, they may also assume the functions of Centres of Excellence in given field such as the application of new information/communication technology in TVET.

While UNESCO is the leading agency in the United Nations System in the field of education, many other intergovernmental and non-governmental agencies also deal with various aspects of education and training. In planning and implementing its Programme on Technical and Vocational Education, UNESCO will seek to develop close co-operation with other partners giving the Programme an interagency character. In this connection, I am very pleased to mention that UNESCO and the ILO have agreed in principle to formulate a joint policy framework in technical and vocational education and training with the goal of strengthening the currently ongoing co-operation between the two Organizations in this field.

Ladies and Gentlemen,

The above-mentioned long-term TVE programme will be UNESCO's response to the demands of Member States to expand our activities with a new approach, a new vision of TVETE for ALL particularly for girls and women, and all countries, during the first decade of the next century. It is my sincere hope that all UNESCO's Member States and relevant IGOs and NGOs in this field will join our efforts to make TVET an effective tool for lifelong learning and training, and a bridge to a better and more prosperous future.

REPORTS OF COMMISSIONS

Improving systems providing education and training throughout life

(Commission I)

TVE as an integral part of national education systems

Challenges and issues

Technical and vocational education (TVE) has, for long, been regarded as inferior to general academic education and has often been offered separately. Whenever it has been offered as formal education, little reference has been made to the needs of the work place. Changes in the work place have not been met with changes in education and training.

TVE has traditionally been viewed as being primarily of economic value with little contribution to the social and cultural aspects of society.

TVE is costly and many countries find it difficult to sustain it without a continued supply of substantial resources. What effective means and strategies can be employed to meet this challenge? The popular notion that TVE should be demand driven does not consider the many situations especially in developing countries where such demand may not be present. What happens then?

The links between TVE and higher education are often weak and in some cases non-existent. This is a major discouragement to those bright students who would have liked to pursue their education and training to higher levels.

Discussions and recommendations

The need for TVE to be integrated in the national education system derives not only from its economic contribution but also from cultural, social and political needs.

TVE should be viewed as a necessary activity and therefore an integral part of education accessible to all throughout life.

Technological literacy and knowledge should be democratized and be made available to enable the beneficiaries to make the right choices about the use of technology.

New competencies and approaches are required: the need to learn continually about how to solve problems, the ability to cope with uncertainty, the ability to innovate and the ability to work with others are essential today and will increasingly be so in the future.

There is a need for renewed popularization and support for TVE. This can be achieved through favourable policy initiatives, media support particularly through radio and television, and community support activities targeting the role of TVE development.

There is still need for more concerted efforts at the international level to support TVE. UNESCO's exemplary UNEVOC project should be supported by other agencies and close partners such as ILO, UNDP, UNIDO and the World Bank.

There is an urgent need to link up TVE with higher education to give opportunities to those beneficiaries of TVE who desire and have the capacity to pursue advanced studies and training. This will encourage those at the lower levels to opt for TVE as a viable career choice and not a second chance opportunity.

Flexible access to TVE throughout life

Challenges and issues

Due to the high cost of TVE the majority of those who could benefit from it do not have access. Available TVE programmes are often de-linked from the production process and to a large extent are delivered using traditional theoretical methods.

TVE does not address the needs of the informal sector where most production activities go on.

The assurance of quality programmes and the award of various forms of certification is another major challenge for TVE. There is a proliferation of certificates and diplomas ranging from short term courses (days and weeks) to long term (months and years). This is often difficult for employers to determine the worth of such credentialing resulting in under-employment in some cases.

Discussions and recommendations

There is a need for clear government policies that give priority to TVE by allocating appropriate funds for its execution.

Partnerships between TVE institutions and enterprises will foster better working relationships that will support and strengthen TVE programmes. This will also give the TVE teachers and trainers opportunities to update their experiences.

There is a need to find alternative methods of delivery of instruction for TVE. Teaching institutions and teachers should be reoriented to use flexible teaching and learning materials. Some of these should include: the development of modularized curricula and assessment methods; the development and use of appropriate technologies for instruction - online services and training materials, computerized learning packages, use of CD-Roms, intranet and internet, etc.

In order to ascertain the quality of programmes and the award of appropriate credentials, it is necessary to: a) develop widely recognized qualification standards and use them for certification; b) develop appropriate tools for assessing practical skills; and c) have flexible and transferable qualifications.

Workforce development for the 21st century

Challenges and issues

The majority of the workforce is found in the informal sector yet TVE often targets those in the formal sector. This is often due to the lack of appropriate national policy frameworks and National Qualifications Frameworks.

Discussions and recommendations

There is a need for an articulated national policy framework appraisal and private/public partnerships for workforce development. All gain when there is a common front forged through coalition building at rural, urban and national levels.

There should be an articulated National Qualifications Framework to guide education and training for the workforce.

Focus should be placed on all sectors of the workforce including the formal, non-formal and informal.

Critical factors for success

Success in the development of the workforce is most likely in situations where the following conditions abide:

- Good governance where transparency and accountability are treasured norms.
- Market orientation in training programmes.
- Open access to education and training with multiple exit and re-entry points.
- Portable skills and lifelong learning.
- Continuous improvement systems, including: assessment, standards and monitoring.
- Public/private partnerships.
- Sustainable financing.
- Replicability.
- Economic, social and environmental impact.

Managing learning throughout life: an example from the private sector

Challenges and issues

Due to the unprecedented growth in knowledge and rapid changes in the workplace, learning and training will be necessary on a continuous level. Training is no longer a one time event. It is a continuous process.

Individuals should be more involved in managing their own learning and training.

Knowledge management will, thus, be key for company success in the 21st Century.

Recommendations

In order to manage lifelong learning it is recommended that viable instructional delivery modes/systems be applied. These will include distance learning, case study, classroom training, self-study, and on-the-job-training.

Initial education and training to ensure re-trainability

Challenges and issues

There is a false notion about the importance and power of administration as opposed to productive labour. This has consequently led to higher and better remuneration for administrative jobs compared to those in technical fields. The result is a conglomeration of highly educated and skilled individuals whose contribution to productivity is insignificant.

Technical colleges and universities tend to focus on theoretical diplomas and degrees with a weak link to practice and the demands of the workplace.

TVE teachers/trainers lack the practical experiences often associated to the world of work.

Recommendations

There is a need for the review of curricula and standards of both education and training in schools, colleges and training institutions to establish appropriate frameworks that favour broad-based rather than narrow specialization in TVE.

New logistical support and operational information systems should be established.

Inculcate and instil into the youth new value systems for self-employment.

Involve social partners in training e.g. trade unions, employers associations, etc.

Educational and vocational guidance throughout life

Challenges and issues

Today, more people than ever before experience frequent career changes and periods of unemployment as a result of the changing demands of the work place. It is difficult to predict with certainty the employment needs of the informal sector which absorbs a major part of the labour force.

It is also becoming increasingly difficult for young people to choose courses of study and careers they would like to pursue in their adulthood.

Adults who may have been laid off or retrenched need guidance and support in looking for new jobs and some time new careers.

Recommendations

There is a need to devise systems and approaches that can assist individuals to identify and assess their own abilities and potential.

Young people need guidance and counselling in choosing courses for study while in school and choosing a career later on while most adults need guidance and assistance in looking for employment or changing careers.

The above services should be expanded beyond the in-school population to include both employed and unemployed youth and adults out of school.

Innovating the education and training process

(Commission II)

The key issues for discussion by participants in the commission were technology, teacher training for TVE, unemployment, women, entrepreneurship, education and training, private/public provision of TVE, TVE and the world of work, and TVE and environmental protection.

TECHNOLOGY

The dominant issue raised in discussion was that of enabling equity of provision and ensuring that technology is not another driver of inequity. Questions from participants generated discussions about what could be done in countries where there are significant technology gaps. It was agreed that in the global society that exists today, there is dangerous potential in not grappling with this issue.

It was agreed that information technology should be integrated into curriculum, preferably through an interdisciplinary approach. This issue led to further discussion about curriculum issues including that curriculum should be responsive to needs of the world of work. Pre-vocational education, including introduction to technology, is necessary.

Participants also raised the issue of how countries can share their resources in the light of intellectual property and funding issues that prevail.

RECOMMENDATIONS TO UNESCO

- Regional assessments to identify technological requirements needed to assess potential problems that particular countries may face.
- Support regional projects to assist in the sharing of technological knowledge and expertise in the training of teachers, development of materials and the refinement of databases that can be accessed by member countries.
- Need to address the issue of a standard/compatible information technology platform for the purposes of educational access.
- UNESCO to mobilise multi-lateral and donor agencies to support transfer and use of information technology.
- International cooperation in the development and production of education materials and sharing of the materials should be enabled.
- Materials should be made cost effective and easily accessible to many countries embracing the needs of both developing and developed countries.

TEACHER TRAINING FOR TVE

Discussion of this issue centred around several areas including competencies required for TVE teachers, relationship with industry needs, work experience for teachers and teacher

upgrading requirements. Current TVE teacher training was identified as problematic because university staff need improved training themselves and industry experience.

A framework for teacher training needs to be identified which recognises regional differences but which establishes high standards.

Competencies required for teachers were agreed to include all areas of professional, general and social knowledge and skills, and that they are complex and changing frequently. Those identified by the Commission include:

- technology expertise;
- team work skills;
- workplace experience;
- flexible delivery/distance learning expertise;
- creative capacity;
- high level skills in their specific discipline; and
- global perspectives.

It was agreed that TVE teacher training needs to be given the same recognition as teachers in general and higher education and that TVE teacher training needs to be continuous/life long learning. A key question raised was how the private sector can be engaged in identifying skills requirements.

A key reason for the drift of TVE teachers to industry was seen to be that they are not valued sufficiently, reflected in salary scales, and they can attract higher pay in industry and are therefore lost to TVE.

Relationship with industry needs was discussed. A problem was identified as how industry demands can be balanced with the need to develop the whole individual through the provision of a general education component of TVE. Participants agreed there is a need to reassess technical teacher education in light of changes in requirements in the world of work and good practices need to be propagated and shared.

Work experience for teachers was identified as a critical factor in providing TVE which has greater relevance. Partnership arrangements between TVE and industry providing work experience must be built on mutual respect and benefit and for mutual benefit. Team teaching was identified as a strategy to achieve this outcome.

Teachers must continuously upgrade their knowledge and skills, particularly to include information technology in their work.

RECOMMENDATIONS TO UNESCO

- TVE as a system requires high status recognition by Governments – this issue is linked closely to the serious need to raise the profile and status of educators in the TVE sector, but in order to deserve and to receive this high status, TVE must promote innovations.
- UNESCO should support the development and conduct of professional development programmes for TVE teachers in the development of flexible learning materials and

facilitate the mutual exchange of experiences through the UNEVOC network.

- UNESCO to support placement of TVE teachers to gain industry experience by conducting feasibility studies, promoting the idea of attachments or internships and offering forums for discussions with industries.

UNEMPLOYMENT

The Commission agreed that the uneven burden in unemployment particularly for youth is untenable and that they are disproportionately effected. This issue was discussed more fully in Commission III but strategies for TVE should include the provision of pre-vocational education to provide school to work preparation and the development of entrepreneurship education as a potential mechanism to alleviate some of the youth unemployment issues. Exemplary programmes should be identified to progress this concept.

RECOMMENDATIONS TO UNESCO

- Continue to raise the issue of youth unemployment with Governments and develop cooperative regional approaches to initiatives aimed at assisting in relieving the problem (without acceptance of TVE holding responsibility for unemployment).
- Development of an entrepreneurship education programme that focuses on key competencies required for the development and sustainability of small and medium sized enterprises – particularly for youth. Case studies and feasibility studies should be undertaken.

WOMEN

The barriers that women continue to face is unacceptable. This issue was also discussed more fully in Commission III. Strategies for TVE should include specific actions to progress the education of women in entrepreneurship in TVE.

RECOMMENDATION TO UNESCO

- That entrepreneurship training for women be developed and a programme of implementation be identified.

ENTREPRENEURSHIP, EDUCATION AND TRAINING

Entrepreneurship education was identified to include:

- External entrepreneurship – setting up as independent owner-entrepreneur;
- Internal entrepreneurship – includes work motivation, responsible flexibility, innovativeness, creativity and self-regulation i.e. personal responsiveness;
- Self directedness; and
- Entrepreneurship – can be incorporated into the educational policy goals at all levels.

Entrepreneurship education leads to a natural consequence of collaboration with workplaces and enterprises. Teachers need to have workplace knowledge and experience in order to teach students in this field of education.

RECOMMENDATIONS TO UNESCO

- Entrepreneurship training should be included in TVE curriculum.
- Inclusion of entrepreneurship in teacher education programs.
- International organisations and NGOs need to support entrepreneurship education in developing countries.

PRIVATE/PUBLIC PROVISION OF TVE

The role of the world of work in identifying the skills requirements for TVE was raised in all presentations. Domination by neither the world of work nor by education is to be recommended. Strong partnerships are required in which each partner values the other's contribution. It was agreed that these must be complementary and mutually beneficial arrangements. The danger of excluding those individuals not in work must be avoided and TVE must be flexible and enable access of those not in work.

RECOMMENDATIONS TO UNESCO

- Establishment of global standards across regions.
- Need to make TVE a global issue across Governments.

TVE AND THE WORLD OF WORK AND COMMUNITY RELATIONSHIPS

Discussion centred around the need for closer interaction between TVE and the world of work, with complementary and mutually beneficial relationships established. TVE tends to be supply-driven but needs to be demand-driven. However, TVE must not merely serve needs of the market, its goal is broader.

Innovation is necessary in TVE employing information technology and emerging good practices. Standards need to be set jointly between industry and TVE providers.

Increased investment in TVE needs to be given priority attention by Governments and other stakeholders.

RECOMMENDATION TO UNESCO

- Assist the developing countries and populations that are excluded from TVE under existing dispensation.

TVE AND ENVIRONMENTAL PROTECTION

TVE curriculum development encompassing environmental issues needs immediate attention since environmental concerns are urgent. Strategies may include the introduction of environmental issues and appropriate foreign languages into curriculum using an integrated approach to ensure that environmental issues are not treated as add-on courses.

TVE for all

(Commission III)

The main issue of concern for the first session of the Commission was the under representation of women in both developed and developing countries. As the traditional perceptions of appropriate roles of women in the workforce, administration and management are being challenged, TVE needs to respond with gender inclusive learning programs for preparing people for the world of work in the 21st century.

Two themes had been identified as starting points for discussion:

- What are the most effective methods for achieving the ultimate goal of gender equality and equal access for all without creating new segregation?
- Are regular TVE programs comprehensive and adequately inclusive to accommodate the needs of all learners, including previously marginalised groups?

Many ideas and comments were generated around these themes and recommendations from participants provide direction for UNESCO and its Member States to address the issues concerning access to TVE for all.

Professor Arun Mishra (India) provided pertinent statistics and examples from India and suggested that many of them will be equally relevant to other developing Asia Pacific countries as well as in other parts of the world. He highlighted the challenges of the technological world in which women's continuing education and skills programmes have to be high in the agenda. The major challenges that we face for ensuring equal access of girls and women in TVE are improving the participation rate of girls, especially in rural areas and removing gender bias in TVE for parents, teachers, employers and society at large.

There are, at present, limited opportunities for learning and employment of girls, particularly in rural areas. In order to ensure both wage earning and self-employment capabilities for women, they need to participate in basic education and TVE programs. Skills in entrepreneurship are also necessary among girls in rural and urban areas.

Mr Henrik Friediger (Denmark) provided a European viewpoint for ensuring equal access for girls and women in TVE. He gave examples from Denmark to highlight that equal rights and opportunities for girls and women have been taken on for many years and much has been achieved. However he suggested that there remains a gender bias in the choice of education and occupation.

Panellists from Australia, Denmark, India and Netherlands further highlighted the issues and suggested positive actions to remove the contradictions in society, within cultural values, norms and religious traditions.

In the second session of this Commission, keynote presentations, panel discussions and open debate revolved around the sub theme TVE for marginalised people and people with

special needs. It was highlighted that to meet the challenges of the 21st century, TVE must provide adequate skills training of high quality for marginalised groups. These groups were defined to include people with disabilities, out of school youth, retirees, migrant populations, unemployed people, people in poverty, refugees, aged people, population in a post conflict situation.

Highly participative debate was carried out around the key question “Are regular TVE programmes comprehensive and adequately inclusive to accommodate the needs of all learners, including previously marginalised groups?”

Mr Jaime Ramirez-Guerrero (Colombia) provided examples from Latin America and highlighted the existing deep disparities in access to education in TVE between high social groups and marginalised groups, particularly for quality education.

Mr Bireme Hamid Abderahim (Chad) described how the post conflict situation in Chad includes educational reconstruction and providing facilities for skills development. Strategies for educational reconstruction include training of teachers, development of relevant curriculum, provision of educational aids and resources, development of infrastructure and providing institutional support.

Mr Robert Hall (USA) addressed the issue of technologically disenfranchised groups who exist in all nations including the more prosperous industrialised nations, the methods used to recognise strategies to meet the needs of these groups and how education can lead to the acquisition of skills that will allow them to become contributing members of society. He pleaded that business and industry must provide resources that will facilitate this learning process.

Mr Trevor Riordan from ILO considered the issue of the world of work and employment perspectives worldwide. Current statistics show 60 million young people between 15-24 are looking for work. There are many other risk groups in all countries including people with disabilities, ethnic minorities, the aged etc. who are particularly vulnerable groups. He gave examples of ILO activities in various parts of the world to emphasise the importance of small-scale highly focussed projects to provide training in the informal sectors.

Panel discussions led by Ms Maria de Ibarrola (Mexico) and Ms Colette Arnold (France) highlighted the special problems of youth without school or employment as well as nomadic people and refugees. The key issue for discussion centred on how to integrate them into the mainstream of society.

The Commission concluded that TVE should be provided not only for economic development but also for individual development, citizenship and peace and that programs which target marginalised groups must be integrated with mainstream TVE activities.

The recommendations which emerged from the discussions included:

- 1. Promotion of TVE as a means to provide equal access and participation of women, girls and people with special needs in education and empowerment of these groups in the community**
 - Parent/teacher orientation and effective use of media for that purpose.

- Guidance and counselling of girls in an integrated manner.
- Providing adequate incentives and positive image for women to participate in TVE.
- Development of self-esteem.
- Improving status of TVE in relation to other education sectors.
- Need to provide courses that extend women's opportunities and have an impact on their empowerment in the community.

Encourage Member States to consider:

- Allocate substantial national resources towards TVE to increase its capacity both in terms of access and range of programs.
- TVE as a tool for empowering all members of the community to face new challenges and find their roles as productive members of the community.
- Providing equal access to TVE for all students.
- TVE for marginalised groups must be mainstreamed with other TVE programs.
- Any TVE intervention for marginalised groups, particularly children in conflict areas, must be accompanied by counselling to overcome emotional problems.

2. Participation in elementary and nonformal education as a valid alternative to formal TVE programs

- Improving participation rate of women in elementary education.
- Provision of formal and non-formal training in traditional trades, particularly in rural areas.

3. Pedagogical issues

- Improving learning environment and making it more suitable for girls to participate.
- Good teaching and learning practices should be implemented.
- A range of teaching methods is required to improve results.

Encourage Member States to consider:

- The range of modes for the delivery of TVE programs required to reach all population groups must include flexible open entry and exit options.
- The design of TVE programs as comprehensive and inclusive systems to accommodate the needs of all learners.
- Multidisciplinary skills training is required.

4. Government commitment

- Improving legislative action.

- National action plans for implementation of affirmative action.
- What kind of effort will inspire the development policy makers and educational planners for steering the nation towards the goal of all toward human development with particular reference to TVE?
- Need to go beyond the writing of policies and develop a national co-ordinated strategy to implement policies and action plans. Needs to include the whole of the education system, monitored at each stage.

Encourage Member States to consider:

- Adequate resources required for people with special needs.
- A major national effort to ensure equal access to TVE.
- Substantial national resources towards TVE to increase its capacity both in terms of access and range of programs.
- TVE as a tool for empowering all members of the community to face new challenges and find their roles as productive members of the community.

5. Workplace issues

- Removing bias and discrimination including salary and pay levels. Disadvantages that women have in meeting higher education payments were identified as an example.
- Development of entrepreneurial skills in women and girls.
- Encourage industry and business to employ more girls.
- Influence the employers/employer organisations.
- Labour market issues for the disabled – identification of issues and co-operative activities with the ILO.

6. Research and publication of models of best practice

Publication and sharing of models of best practice from the regions to help countries facilitate the development of TVE for all. The UNEVOC Clearing House and database established by the Asia Pacific region is a basis for this sharing of information.

7. Attitudes and stereotypes

Elimination of stereotypical view of girls and women TVE is encouraged. Member States should consider the development of strategies to facilitate changes in attitudes that encourage discriminatory practices in the development and delivery of TVE programs.

8. Representation of women and disadvantaged groups at UNESCO activities

The under-representation of women and disadvantaged groups at the Congress was noted and several participants recommended that this should be addressed at future UNESCO activities.

Changing roles of government and other stakeholders in TVE

(Commission IV)

The Commission, through its keynote speeches, panel discussions and interventions, noted the changes that have dominated the last two decades of the 20th Century - rapid scientific and technological advances, political changes that have led to the disappearance of cold war tensions, liberalised trade and markets, and new global migration patterns that are impacting on the way we live, learn, work or think about work. These issues are inescapably and urgently changing and reshaping the roles of government and the other stakeholders in TVE. The scope and scale of change, and the nature of the stakeholders' roles are likely to differ in the various geographical regions, Member States, and even within a given country. The variation in the role of government and other stakeholders requires new commitments and coherent social partnerships which emerge from, and are created nationally and regionally. Upgrading their level of participation in programme and project planning, development and implementation must be an outcome of good faith and commitment from a diversity of stakeholders.

Although governments carry the primary responsibility for TVE, in a modern market economy TVE policy design and delivery must be achieved through a new partnership between government, employers, vocations, industry, trades union and society. The role of the state will remain pivotal in creating the necessary enabling environment to enhance the participation of its social partners. This may be achieved through legislation, upgrading policy design and in delivery systems. The state must be concerned principally with the creation of a policy framework for education and training that forms part of the national development plans for change. Together with its partners the state will facilitate, co-ordinate, regulate and monitor quality assurance across both the supply and the demand sides. These responsibilities must extend to public and private institutions; general education and TVE; formal, non-formal and informal education; rural and urban populations; with equal force to both genders; all age groups; the able and the disabled; and large, small and medium sized enterprises. By employing such an approach the state and its social partners are more likely to build stronger economies, enhance social cohesion, humanity and the protection of the environment. It will also widen participation in education and training that will promote a culture of lifelong learning. The partnership between the state and the other stakeholders must work towards the ultimate objective of creating a learning society.

A vibrant economy is best served by a diversity of public and private providers of TVE. The combination or balance between the providers may be struck in many ways but the government should ensure strong basic preparation by all providers. Government should also be considered the provider of last resort to ensure that potentially excluded sections of the population are included.

Decentralizing activities according to the needs of the communities or areas within the country is an important factor in generating new partnerships between employers and the various other sectors of the economy. This foregoing vision can be effectively reflected by the priorities that governments and their social partners accord the implementation plans and the resources allocated to education and training. The responsibility for the initial basic and vocational

preparation shall still remain primarily with the state, and can be designed to ensure employability and retrainability. It is important to expand and reform employment-based training to ensure articulation with institution based training through a national framework that includes individual learning credits banks and records, and the flexibility of multiple entry and exit points.

In many countries the provision of TVE is the responsibility of several government ministries, and sometimes of different departments even within the same ministry. When the responsibility for TVE is shared in this way co-ordination mechanisms are required to ensure that the programme is truly national and efficiently conducted with appropriate linkages and articulation between and within different authorities and departments of the government.

The role of employers, trades union and associations in TVE have been changing and growing. Large enterprises and professional associations are active in providing long and short TVE programmes. The quality and effectiveness of such programmes may vary in the industrialized countries, countries in transition, and in those with stable or declining economic growth.

The new vision for TVE should include facilitating the exchange of experiences, data and information on innovative approaches and new roles for employers, unions and professional associations. This could be achieved by creating information networks, and harnessing the multi-media information and communication technologies and data-banks. Employers could enhance their employee retraining programmes to upgrade skills by providing facilities for on-the-job training.

Voluntary organizations and non-governmental organizations (NGOs) make extremely valuable but often overlooked contributions to TVE. The role of NGOs in TVE has been changing dramatically during the last decade. Many NGOs have helped establish formal, non-formal, and informal education and training programmes. NGOs are also increasing their involvement in related areas such as poverty alleviation, employment generation, services for marginalized groups and empowerment of the disabled. TVE programmes are being used by NGOs as an important avenue for the afore-mentioned groups to acquire the knowledge and experiences demanded by the world of work. TVE is thus perceived as an effective means of overcoming the social and economic difficulties encountered by these sections of society. The new roles that NGOs are now playing in the field of TVE must be acknowledged and enhanced in order that a new culture of lifelong learning is introduced outside the formal education system.

The Commission proposed selective measures to be taken by Member States, TVE institutions, and the UNEVOC Network in this area, such as the analysis of labour market situations and needs; more linkages with local business and industry; and new specializations to meet labour market needs at the education and training system level.

To facilitate better funding of the educational and training sector, the government shall need to develop appropriate tax incentives and other benefits to stimulate and support private sector participation in TVE. Further, the state must ensure that education and training are delivered cost effectively both by itself and its social partners with optimal utilisation of resources. Financing TVE programmes and projects is an increasingly complex task for governments and other stakeholders. Many Member States are facing difficulties in keeping up

with the demand for programme expansion, new equipment and the introduction of modern technologies in TVE. However, government and private sector must recognize that TVE is an investment, not a cost. It yields significant returns such as the well-being of workers, enhanced productivity and international competitiveness. Government, industry and other stakeholders must recognize both the monetary and non-monetary benefits of TVE. Funding for TVE must be shared to the maximum extent possible between government, industry, the community and the learner.

The human and financial resources allocated for TVE are sometimes diverted, in certain cases, to other parts of the system, which in turn affect TVE quality, effectiveness and efficiency to meet emerging needs. Governments must therefore streamline their institutional framework to achieve a coordinated national TVE system which involves partnership of both private and public partners.

The role of donor agencies and funding institutions shall be enhanced and supported in the field of TVE, especially in the countries with social and economic difficulties. The role of TVE institutions in finding partnership with business and industry in generating new project development require careful analysis. The benefits of these partnerships should be shared equitably by all the stakeholders.

There are also opportunities for fund-raising and income-generating activities through collective effort. The mix will vary for each country. All partners in society will benefit from TVE and therefore they should assume the responsibility for the sustained vitality of their TVE system through cost-sharing mechanisms.

Widening partnerships between government, its social partners and other stakeholders for the development of TVE for the new millennium is an unavoidable trend. Many sectors of the community must be involved as responsible partners in the development of TVE. Each of the key players working alone cannot achieve results greater than the sum total of all working together. While the involvement of the private sector is growing in many countries, governments are responsible for developing and providing the necessary legislative framework. It is therefore essential for those of who have already embarked on this cause to proceed with even greater urgency and commitment. For those whose of who have not yet initiated this change it is necessary to start soonest and in earnest and to mobilise support and to explore the lessons of countries already on this road. There is a need for cooperation between developing and developed countries and countries with emerging market economies. Experiences could be shared in the areas of design and operation of national TVE policies and strategies and in determining the roles of public and private partners.

All stakeholders should constantly upgrade their knowledge and expertise in areas that impinge on TVE. Effective mechanisms must therefore be devised for sharing experiences and expertise through research especially in key policy issues. Other areas requiring constant revitalization include shared databanks and multi-media technologies. The proposed new partnerships and responsibility sharing in TVE financing require more cooperation among institutions and between Member States through regional and international cooperation.

RAPPORTEUR-GENERAL'S ORAL REPORT

Kenneth Wiltshire

Chairman, Australian National Commission for UNESCO and
Special Adviser to the Australian National Training Authority

**Mr President,
Distinguished participants and observers,**

Our Congress has produced a rich discussion and debate regarding the factors which will shape Technical and Vocational Education in the new century and millennium. Please allow me to highlight some of the key elements of our deliberations.

Visions of the 21st century

We have been treated to a number of significant visions of what the next century will look like. The President of the Congress, Minister Mr LEE Hai-chan, launched our thoughts with these words:

We are about to step into a new era of unprecedented changes as national boundaries disappear and globalisation proceeds. Future jobs will require more diverse vocational abilities and knowledge, calling for educational reform and a guaranteed system of lifelong learning for all.

Then Mr KIM Dae-jung, the President of the Republic of Korea, in a speech to Heads of Delegations at the Presidential Palace, made this prophetic observation which has permeated the whole of our discussion at the Congress:

The twenty-first century will be an era of knowledge, information and civilization.

The key features of the 21st century predicted by many speakers included:

- Globalization.
- Competitive pressure.
- Reducing of international boundaries.
- The mobility of capital and labour (a point stressed in the preparatory meeting held in the Asia-Pacific region).
- Increased trade flows through liberalization and the internet. The increasing importance of the World Trade Organization.
- New technologies, especially in information and communication.
- The growth of the service industries (emphasized by Professor Colin Power).
- Increases in leisure, culture and tourism (a theme strongly emphasized in the preparatory meeting in Europe).
- Increases in longevity. This point was stressed in the communique issued by Ministers after their formal meeting during the Congress. It is especially apt in the International Year of the Older Person.
- Increasing anxiety and turbulence including that stemming from changes in occupation (a point made forcefully and effectively by Dr Schmidt of Germany).

- The future of education itself which, according to the Delors report on education for the twenty-first century, should be built around four fundamental pillars:
 - * Learning to know;
 - * Learning to do;
 - * Learning to live together;
 - * Learning to be.

At this Conference, we have decided that the foremost attribute of the next century will be learning to learn. Dr Schmidt called it independent learning.

Interestingly, as this Congress has proceeded we have been faced with images, seemingly contradictory, which will impinge upon the next century. Consider the rich cultural milieu provided to us by the colourful and beautiful dancers and drummers who have entertained us, whilst at the same moment in the foyer of the Congress Hotel a piano has been constantly playing automatically, with no person at the keyboard. No doubt the twenty-first century will have many paradoxes of this kind, both opportunities and challenges, symbols of the future.

A new paradigm

Out of our consideration of the trends which are looming as we face the next century and millennium has come the unmistakable signal that the world needs a new paradigm for social and economic development.

In the words of the Prime Minister of Korea:

With the emergence of globalization and the information era, the international community has witnessed a tremendous paradigm shift. The knowledge-based society is at hand which requires every citizen, in every field, to be equipped with the latest knowledge and vocational skills.

So what should the new paradigm look like? These were some of the key words used by various speakers throughout the Congress:

- Developmental, not development
- Human centred
- Environmentally sound sustainable development
- Culture of peace
- Social transformations
- Inclusivity
- Empowerment
- Harnessing of technology
- A new form of entrepreneurship and self-reliance
- Learners as navigators shaping their future
- Continuous and independent learning. (It was said at this Congress that success in TVE can be measured according to the degree of its success in creating opportunities for continuous independent learning.)

Taking into account this bare outline of a new paradigm, a number of responses have been foreshadowed. The key words of this response which have been mentioned include:

- Flexibility
- New modalities
- Lifelong learning and all it signifies
- Radical thinking such as that from an industry perspective (Alcatel told us that the 21st century will need high potential not high competencies not competency but potential for competency; capability, curiosity, willpower)
- A new learning culture. (In Australia we believe that a nation, like an organisation, needs a learning culture to be productive and competitive, and to care for the well-being of its people, and a vibrant training culture is a key factor in attaining that goal.)

In the words of the Director-General of UNESCO, TVE and the skills it imparts will empower youth and adults to play a part in the new development paradigm.

Congress landmarks

During the course of our deliberations a number of highly significant points have been made, many of them seminal observations indicating profound changes for a new strategy.

Many speakers have commented on the immense progress which has been made since our last Congress some 12 years ago, with the growing recognition of the importance of TVE and its contribution to economic and human development. At the same time we have been reminded that not all countries have enjoyed these benefits and much still remains to be done, especially in developing countries.

We have had displayed before us the amazing record of our host country, the Republic of Korea. Some 100 years after the launching of TVE in this country we see the Republic of Korea about to perform its second modern miracle and the leaders have told us that in their sustained performance, through both good and adverse times, investment in education and training was a key factor.

The sheer documentation for our meeting has contained a great deal of lateral thinking - the reports of the preparatory regional meetings, the reference documents, the basic working document, and the keynote speeches. We are immensely grateful for the efforts of those responsible.

The President of the Republic of Korea told us, "the ability of a person is no longer evaluated by which school he or she has graduated from. A person's ability is determined by his or her knowledge."

The press release from the Ministers made the highly significant observation that the distinct division between vocational education and vocational training is of no use and these two separate systems need to be integrated functionally and physically to establish a more effective human resource development approach. This echoed the very strong plea from Dr Al-Masri for education and training to be regarded holistically which, he said, was the key to lifelong learning. The Director-General spoke of the interconnectedness of all aspects of education.

In this spirit, the contribution of Saudi Arabia was particularly pertinent as it challenged us to develop a holistic system of education and training that dissolves the boundaries between academic/vocational, knowing/doing, head/hand, theory/applied, and school/work.

Training is an investment, not a cost, we were told. It is as much a social as an economic investment. Indeed, social chaos may be the alternative, we were reminded by Dr Schmidt and Dr Bahaa el Din, the Egyptian Minister.

The Director-General of UNESCO strongly stressed this theme of TVE being part of a preventive approach, to achieve a culture of peace, a cleaner environment, eradicate illiteracy, and empower people, TVE is crucial, he said. "Education is the single most powerful weapon against poverty," and he called for the interconnectedness of all forms of education for each person. The backbone of a nation, he claimed, was its technical and professional capacity which needs social investment.

Three areas of particular significance, but which are so often overlooked, were presented before us and their needs highlighted. They included the dimension of the informal sector (stressed in the African preparatory meeting), the importance of the rural sector (effectively presented by the Chinese intervention), and the complexities of the newly emerging market economies and new democracies, especially in Central Europe and Asia (well emphasised by Hungarian interventions).

In the Nordic countries TVE aims to involve young people in democracy, give them generic skills, and create the bridge from TVE to the world of work. Finland argued that all young people should have a chance of access to TVE. According to the Nordic countries, TVE includes competence building beyond the acquisition of work related skills, a truth that reminded me of a wise saying from my school principal that "education is what is left after you have forgotten everything that you were taught." It also reminds us of that famous saying, said to be a Chinese proverb: "Give a man a fish and you feed him for a day, teach him how to fish and you feed him for a lifetime." After this Congress we can now add: show him where to fish and you enhance his productivity and his standard of living.

The vital importance of vocational guidance and counselling was an element of many interventions in our discussions. It came particularly from the Commission considering TVE for All, and the message was that it must be targeted, must not rely on information technology alone but embody true personal guidance, and must be accessible in the places which most people visit, not solely in educational institutions.

The Arab states, in their preparatory meeting, reminded us of the importance of nations having legislation, policy and strategies for TVE.

The deliberations of the NGO forum associated with the Congress reminded us of the vital but often undervalued contribution which NGOs play in education including TVE.

Many speakers have highlighted the need to raise the status of TVE, and lift its image, and achieve parity of esteem for it with all sectors of education including universities. Support from the media was strongly recommended in the Latin-American preparatory meeting; this may require a concerted marketing effort accompanied by a simplification of the sector. Most people know what a school is, and what a university is, but TVE is often perplexing to them with its vast array of levels, courses, modules, providers, and particularly its complex language which is so often riddled with acronyms. Consider this imaginary conversation which an outsider to our sector might hear:

EFA needs TVE emphasizing HRD, especially in LDCs, with the help of NGOs, and the OECD, ILO, ADB, UNEVOC, through the use of ICT, funded through a P/P, not forgetting ADED, in a recommendation through the DDG-ED to the DG, telling him that TVE is really TVET and should become TVETE.

Professor Colin Power did us a great service in reminding us that, despite the marvels of the new technology we must never lose that magical personal relationship between teacher and learner.

Challenges

There have also been a significant number of challenges put before us at the Congress, most of them issues or items that are unresolved, or have been neglected, and will need considerably more attention before we can face the next century with confidence.

The Director-General of UNESCO reminded us starkly of the seemingly inescapable constraints which many developing countries are facing as a result of their debt levels, their unacceptably high rates of illiteracy, the large numbers of drop-outs from the education system, and the scourge of conflict and war. We were also reminded of so many of the population who are marginalized including those living in the midst of urban as well as rural despair.

We have been marvelling all week at the capabilities of modern technology which is conquering outer space and cyberspace, and raising possibilities such as genetic engineering. Yet where is the value framework, the ethical dimension to guide these scientific and technical developments? And technology is not always necessarily beneficial for education and training - "hands on" can often mean "brains off".

The prospect has been raised at this Congress of a necessary synergy between general and vocational education, between education and training, but we are not clear yet what form this can take. Is it to be total integration, or co-ordination, or recognizing each other's passports and visas at the borders of the education sectors? Clearly there is a continuum, a spectrum, which confronts all systems: the challenge is how to make it holistic. In my country Australia we now have very many students proceeding from university after graduation to TVE to acquire skills and competencies to make them more employable. Indeed, there are a growing number of students undertaking a university degree and a TVE diploma or Certificate at the same time. These are all signs of a need for seamless pathways on the journey of lifelong learning but authorities need to ensure they present as few obstacles as possible. This means the closest possible interface between school, TVE and university.

Other key issues which have arisen during the Congress include:

- The appropriate mix in the funding of TVE between government, employer, and learner. The World Bank raised the question of who should pay for TVE, whether training levies can work, and stressed that the clients of TVE are very different, and what works in one economy may not work in another.
- How to break down barriers that produce gender discrimination.
- How to really widen the ambition of the disabled and to create the opportunities for them to reach their full potential and become employed.
- What should be the qualifications and skills required of a TVE teacher? How much pre-service should be in the workplace and on the campus? What is the nature of the professional development that they require?
- How do we really reach the marginalized? As France expressed it, how can TVE be made accessible to all?
- What strategies need to be employed to address declining retention rates?
- What is the appropriate balance between policies to address the supply and the demand side (a key feature of Dr Al Masri's presentation. It was also featured by the Inter-American Development Bank which spoke of a mismatch between supply and demand, including schools which provide the wrong product, and TVE that should be driven more by demand.)

- What models are available to create a partnership between the learning environment and the working environment, the school and the broader community (a point stressed strongly in the intervention of France)?
- What curriculum models are best used to introduce vocational education into school systems?
- What research do we need to commission to understand better the key moments and choices which confront the learner on the journey of lifelong learning, an especially poignant issue for the disabled or disadvantaged.

Partnerships

To address all of these challenges it is clear that in the next century we are going to require many partnerships, the *Yin* and the *Yang* of human existence translated into the world of TVE. Perhaps one of the greatest successes of this Congress has been a true willingness on the part of the participants to identify these necessary partnerships and to make them work. We need partnerships to address:

- A common philosophy to guide our approach.
- A set of shared values on which to base a new holistic curriculum and inclusive framework for participation.
- A common vision.
- A declared strategy.
- An holistic approach to lifelong learning.
- A synergy between the economy and the education system.
- A set of new relationships between TVE and industry. (This was stressed in the Asia/Pacific preparatory meeting and in the roundtable on TVE links with enterprises and was so amply demonstrated by the effective participation at the Congress of the World Bank, Alcatel, the Inter-American Development Bank. They demonstrated a keen understanding of TVE systems and presented us with constructive ideas and offers of assistance. Their contribution was a highlight of the Congress because it signalled the beginning of a new partnership which will be essential in the next century.)
- We heard a great deal as well about the need for new partnerships between
 - Development and the environment.
 - Basic education and higher education.
 - Education and training.
 - Government sector and private sector (expressed in the European preparatory meeting as the need for complementarity).
 - Government and NGOs.
- Better co-ordination between ministries with responsibilities for aspects of TVE, especially employment, education, training, economic development and welfare.
- Much more effective liaison and joint effort between TVE and the mass media.
- School and the workplace (many ideas were suggested in particular by Brazil, France and Finland).
- Closer exchanges between researchers and policymakers (an important lesson from the NGO forum).
- More understanding between youth and adults.
- Perhaps most important of all, the point stressed by Professor Colin Power, the need for the ongoing partnership between the master and the apprentice, the teacher and the learner.

Windmills

"When the winds of change blow, some build walls, others build windmills."

Emerging from our deliberations a number of windmills have been identified as sources of energy which will take us forward into the 21st century. They include:

- UNESCO working with its international partners.
- Political commitment.
- Leadership and vision to create a strategy.
- Continuous lifelong learning.
- Teachers as mentors.
- Expanded resources.
- More status and prestige for TVE.
- Marketing.
- Partnerships.
- Citizenship.
- Harnessing of new technologies.
- Curriculum reform.
- Quality assurance.
- Research linked to policy-making including the need for early warning systems on changing economies and labour markets (stressed in the European preparatory conference).
- International co-operation including north-south and south-south mutual assistance.
- The statement of the ministers on the need for "Financial aid from international funding agencies, donor agencies, and development banks to the developing and underdeveloped countries to improve the quality of TVE in those countries." (The Bureau of the Congress felt so strongly on this point that they recommended that there should be inserted into the conditions of such financing that funding must go to TVE.)

An important message is that windmills are not expensive to construct and they can produce cheap renewable energy. Large-scale expense to innovate and renovate TVE is not always necessary.

Bridge to the future

This Congress itself has truly been a "bridge to the future". The Congress will be remembered most for the way it identified a new developmental paradigm for the new millennium, and began to shape a strategy for technical and vocational education to address this new paradigm, identifying the challenges and discovering the windmills which will capture the winds that can blow us to a new era where the creativity and fulfilment of each human being will lead to a culture of peace.

In the countries of the South Pacific it is said that there are four schools: the home, the church, the school, and the workplace. We have identified all of these and begun to understand the essential relationship between them. This is, after all, the key to lifelong learning.

Youth

Finally there is a matter of utmost importance for our hopes for the 21st century - the future of our young people.

The UN definition of youth is 15-24 years and in the year 2000 there will be 1.1 billion young people in this world, the largest single group in the population. Some 919 million of them will be in developing countries.

We are about to hand over the world to them but they are living in the midst of turbulence and uncertainty. After all, we promised them that when we managed to control inflation we would turn our attention to unemployment, but the unemployment rates are too high, especially youth unemployment, and particularly in rural areas.

Other factors confusing their situation include social dysfunction including the break-up of families; changing role models who come nowadays mainly from pop music or film or video; the poor standards of behaviour of our civic leaders; the impact of the culture of the screen, large and small, on values, and the clash between traditional and such imported values; irrelevant school curricula which is so often oriented towards university entrance when the vast majority of school students will not go directly to university; alienation and despair too often leading to suicide, which is the largest source of death amongst young people in so many countries.

We cannot be sure of their values, cannot be sure those values are in line with multilateralism and tolerance. We cannot be certain they will not become self-centred rather than community-centred. In the light of the turbulence created in the wake of the trends we have identified at this Congress, we should not be surprised if young people become more introverted and withdrawn.

But the good news is that deep within each young person's heart and mind is a desire to be positive, to contribute to society, to seek a meaningful existence, to make a difference in the world. All they want is for us to treat them as equal partners, meet them on their "planets", regard them not as the problem but as part of the solution, not consider them as objects of research but partners in the research.

Surveys of young people world-wide have revealed that the main concerns of young people today are employment, education and training, and the environment, all aspects which can be addressed in strengthened TVE systems.

Technical and Vocational Education can make a real contribution to the lives of our young people. It makes sense - if they have a curriculum that they and their families can see is relevant, practical, uses their creativity and ability, is engaging, and will be relevant to the workplace, they will respond very positively. It is happening. TVE in schools is taking off all over the world.

TVE is not the only answer but it is an important part of the answer. I have seen schools transformed when they have introduced TVE into their curriculum, along with effective vocational and personal guidance and counselling. The behaviour of the students has improved dramatically, the tone is different.

We must ensure that, in the follow-up to this Congress, our efforts are directed particularly to young people. Lifelong learning will be the answer for them and their generation for they will live most of their lives in the 21st century.

Since wars begin in the mind, it is in the mind that the defences of peace must be constructed. Our challenge is to create peace in the minds of youth. They are the future. The little angels of today will become the Voice of the New Millennium.

Technical and Vocational Education and Training: A Vision for the Twenty-first Century

Recommendations to the Director-General of UNESCO

Preamble

We, the participants in the Second International Congress on Technical and Vocational Education whose theme was Lifelong Learning and Training : A Bridge to the Future, meeting on the eve of a new century and millennium in Seoul, the capital of the Republic of Korea, a country which epitomizes the contribution of education to social and economic progress, have had the opportunity to work together in plenary sessions, commissions, round tables, and forums, to contribute to a world vision and programme for Technical and Vocational Education and Training (TVET) for the first decade of the new millennium.

We have considered the emerging challenges of the twenty-first century, a century that will be an era of knowledge, information and communication. Globalization and the revolution in information and communication technology have signalled the need for a new human-centred development paradigm. We have concluded that Technical and Vocational Education (TVE), as an integral component of lifelong learning, has a crucial role to play in this new era as an effective tool to realize the objectives of a culture of peace, environmentally sound sustainable development, social cohesion, and international citizenship.

Mindful of the opportunities that lie ahead of us and those which will progressively unfold, and cognizant of the policies, partnerships and resources needed to raise the status and broaden the traditional vision of Technical and Vocational Education, and recognizing the need for strengthened international partnerships particularly to address the needs of developing countries, we are forwarding the following recommendations to the Director-General of UNESCO and requesting him to submit them to the next session (30th) of the Organization's General Conference in view of its intention to launch a new global strategy for Technical and Vocational Education.

Theme I: The changing demands of the twenty- first century: Challenges to Technical and Vocational Education

- 1.1 The twenty-first century will bring a radically different economy and society with profound implications for technical and vocational education. TVE systems must adapt to these key features which include globalization, an ever-changing technological scenario, the revolution in information and communications, and the consequent rapid pace of social change. The implications of these transformations include the increased mobility of labour and capital, uneven impacts upon rich and poor, and emerging market economies in both rural and industrial sectors. The knowledge-based society which these changes are bringing offers exciting new modalities for education and training.
- 1.2 These social and economic trends predicate the need for a new development paradigm which holds a culture of peace and environmentally sound sustainable development as

its central features. Accordingly the values, attitudes, policies and practices of TVE must have their foundations in this paradigm which will encompass inclusiveness and wider access, a shift to human development needs, and empowerment for effective participation in the world of work. Its focus must be on the needs and potential of the individual in society. TVE has a crucial role to play in this new paradigm by providing skills for all and should include the poor, the excluded and the unreached so that education remains an accessible basic human right. The universalization of TVE and the learning skill it imparts would enhance access to education for all citizens of the world. A new holistic approach is required so that education for the twenty-first century will include all domains of learning incorporating general and vocational education to enable the learner of the twenty-first century to launch into a lifelong continuum of knowledge, values and attitudes, and competencies and skills. The ultimate goal of such an approach would be the creation of a learning society.

- 1.3 Therefore TVE systems must be reformed to give life to this new paradigm by achieving flexibility, innovation and productivity, imparting the skills required, addressing the implications of changing labour markets, training and re-training the employed, unemployed and the marginalized with the objective of achieving equality of opportunity for all in both the formal and the informal sectors of the economy.
- 1.4 There must be a new partnership between education and the world of work to address the need to develop a synergy between the sectors of education and industry and the various other economic sectors, to foster the development of generic competencies, the work ethic, technological and entrepreneurial skills, and for imparting human values and standards for responsible citizenship.
- 1.5 There is a need to introduce the required changes in a manner suitable for each country, so as to empower and engage human beings in the context of the new paradigm, with TVE as a common key focus of the reform process.
- 1.6 The pre-requisites of the TVE response to the new paradigm include appropriate societal values and attitudes, embracing the new technologies, making new policy and financial commitments, and taking account local, regional, and global opportunities and concerns. The sheer magnitude of the trends of the twenty-first century demands a political commitment and bold policy responses which are both regional and international.

Theme 2: Improving systems providing education and training throughout life

- 2.1 Lifelong learning is a journey with many pathways and TVE is an integral part of the voyage. Therefore TVE systems should be designed as developmental life experiences with cultural and environmental aspects in addition to their economic dimensions.
- 2.2 To make the maximum contribution to lifelong learning TVE systems need to be open, flexible and learner-oriented. They must do more than just provide the learner with knowledge and skills for specific jobs. They must also prepare individuals more generally for life and the world of work. TVE is for personal, social and economic benefit.
- 2.3 TVE needs to be based on a learning culture shared by individuals, industry, different economic sectors and government in which individuals are empowered to take progressively more responsibility for their own knowledge-management and independent learning while public and private providers ensure programmes that facilitate access to and through the pathways of lifelong learning.

- 2.4 TVE has an important role in reducing levels of anxiety in the midst of constant uncertainty by providing information and knowledge, skills and competencies, entrepreneurial capacity and the development of the human personality.
- 2.5 All nations require a coherent education policy and co-ordinated education systems within which TVE must be a fundamental part. TVE should develop close interfaces with all other education sectors, particularly schools and universities, to facilitate seamless pathways for learners. The emphasis must be on articulation, accreditation and recognition of prior learning to enhance their opportunities. Within this spectrum TVE has a responsibility to ensure a sound initial education and training aimed at learning to learn, the most precious skill for all citizens both young and adult.
- 2.6 Perhaps the biggest challenge which faces TVE is to co-ordinate the needs of a general and a vocational education through curriculum, pedagogy and delivery. Each country will wish to pursue its preferred approach to co-ordinate these domains but it is clear that the demands of the twenty-first century require new synergies between these fundamental pillars of education and training systems.
- 2.7 TVE should inspire in young people a positive attitude to innovation, enable them to help shape change and prepare them for self-reliance and citizenship.
- 2.8 TVE is particularly important in ensuring a seamless transition from the school to the workplace. To achieve this it needs an holistic approach which captures the dichotomies of the academic and the vocational, the theory and the applied, knowing and doing, the use of the head and the hand. This requires effective partnerships with schools and with industry and other economic sectors which embrace shared values, shared curriculum, shared resources, and shared outcomes.
- 2.9 The informal economic sector is often excluded in the spectrum of lifelong learning. TVE has a vital role to play in reaching out to this sector in every way possible to ensure that the less privileged have access to the pathways of continuous learning. This applies with equal force to those who drop out of the formal cycle of education.
- 2.10 To achieve all of these aspirations for Technical and Vocational Education a number of urgent considerations must be addressed:
 - the status and prestige of TVE must be enhanced in the eyes of the community and the media. This includes raising the status of teachers in TVE systems through attention to their own skills and competencies and the provision of resources for their task. It will also require strong marketing of the capabilities of TVE to its many stakeholders, accompanied by a simplification of TVE in the minds of many who find its language, its products and its modalities too complex. Publicizing and disseminating models of good practice in TVE are also important. There is a need to promote parity of esteem between vocational and general education, especially in developing countries;
 - the sectors of education must achieve more effective inter-relationships to facilitate more seamless pathways for learners. They do not need to be homogenized; each sector can retain its identity and they all can recognize each other's passports and visas at their borders;
 - there must be flexibility in programme administration and curriculum design to facilitate a smooth passage through lifelong learning and provide continuous entry, exit and re-entry points;
 - career guidance and counselling is of the utmost importance for all clients of the

education and training systems and needs to be significantly strengthened. Career guidance should take into account the needs of industry, the individual and the family and be sensitive to each learner's requirements and circumstances. Its role should be extended to prepare students and adults for the real possibility of frequent career change which could include periods of unemployment and employment in the informal sector. It should not only be a recognized function of educational institutions but should also be provided at other venues accessible to the population at large;

- all stakeholders, particularly industry and educationalists, must be involved in new TVE partnerships. Each has much to learn from the other in approaches to lifelong learning;
- the high cost of many TVE programmes must be addressed. They should be re-designed to incorporate more workplace learning;
- the lifelong learning continuum will be best sustained if there is a diversity of funding, a diversity of providers, and a diversity of delivery mechanisms. Innovative approaches to flexible delivery of TVE including the use of information and communication technology and distance learning should be particularly welcomed;
- quality assurance is essential to ensure a new higher status for TVE. Qualification standards, certification processes, valid assessment methods and acceptable outcomes are all key ingredients and should be the hallmarks of all TVE systems;
- We need to understand more about the critical moments of choice on the journey of lifelong learning. More research should be encouraged to help understand the key issues, dilemmas, potential barriers and opportunities which confront the voyager at the various phases of the journey. More longitudinal studies would be of significant benefit in this regard.

Theme 3: Innovating the education and training process

- 3.1 The challenges facing the learner of the twenty-first century demand innovative approaches in TVE. This is seen most clearly in the need for a re-oriented curriculum to take account of new subjects and issues of importance. Obvious examples would include technology, the environment, the understanding of foreign languages and cultures, entrepreneurial capacity and the requirements of the rapidly growing service industries connected with leisure, tourism and hospitality.
- 3.2 The rapid pace of change also introduces the prospect of a virtual curriculum whereby learners must be prepared to cope with the obsolescence of their knowledge and skills, and the introduction of new elements which have yet to appear in common usage. They must also be prepared for a radically new labour market in which traditional wage-employment may be the experience of only a minority and self-employment in various forms may offer a high potential for economic independence in a new era of entrepreneurship.
- 3.3 The new information technology has opened up a whole new potential in technology-based learning. It should be possible to use and apply simple as well as modern technology and the new information and communication technologies in the TVE teaching and learning process without losing the valuable aspects of traditional teaching methods particularly the personal nature of the teacher-learner relationship. Technology-based learning should play a crucial role in the development of a culture of lifelong learning with the capacity to empower learners by providing them with multiple new pathways to meet their education and training needs.

- 3.4 The new technologies must be harnessed to provide widespread access to TVE. They should be used to make distance irrelevant and to render curriculum-based knowledge and vocational guidance information more easily accessible to all. They have the potential to offer flexibility in time and location to TVE delivery, and should enable TVE to function as a catalyst for the penetration of new technologies in under-developed regions of the world, particularly in rural areas.
- 3.5 As the workplace calls for more sophisticated skills, a sound basic education must be provided as a pre-requisite foundation for TVE. This should involve the acquisition of more complex competencies in school, including enhanced literary and numeracy skills and the ability to understand and communicate through the tools of modern technology.
- 3.6 Since technology comes at a price, ways must be found through partnerships with industry, financial and aid agencies, regional and international co-operation, to address the high costs involved, especially for developing countries. New ways must also be found to share intellectual property for the benefit of learners in all countries and situations.
- 3.7 Given the essential need for innovation in TVE, the role of the teacher remains paramount. New methods must be found for the initial training of teachers accompanied by the continuous upgrading of their competencies and professional development. A re-thinking must take place as to the qualifications required of the TVE teacher of the twenty-first century, including the optimum balance of training acquired on the campus and in the work place. They must be assisted to develop new and appropriate instruments of assessment, accreditation, articulation and certification standards.
- 3.8 TVE needs an early global warning system and more futuristic studies to enable preparation for changes in the work place and in society. Industry must be involved with Governments and research centres in identifying the knowledge, skills and competencies which will be required by the changing economy so that TVE systems can adapt. The prospect of competencies applicable across regions and internationally should be addressed to respond to the projected escalation in resource mobility in the next century.

Theme 4: Technical and Vocational Education for all

- 4.1 TVE is one of the most powerful instruments for enabling all members of the community to face new challenges and to find their roles as productive members of society. It is an effective tool for achieving social cohesion, integration and self esteem.
- 4.2 TVE programmes should be designed as comprehensive and inclusive systems to accommodate the needs of all learners; they must be accessible to all. Special efforts are needed to reach previously marginalized groups. Where specialized programmes are required, these should be designed to facilitate entry into the mainstream, thus ensuring continued access to lifelong learning.
- 4.3 The list of recognized marginalized groups is becoming longer and there are certain to be others which are yet unknown. TVE programmes, both formal and non-formal, must be made available in varying modes of accessible delivery, to the unemployed, early school leavers, out of school youth, those disadvantaged by distance and location, rural populations, indigenous people, those in the midst of urban despair, populations engaged in informal labour markets with poor working and living

circumstances, children working under hazardous conditions, refugees, migrants, and demobilized soldiers in post-conflict situations.

- 4.4 The under-representation of women in TVE is of particular concern. Traditional perceptions of appropriate roles for men and women in the work place should be challenged. TVE must respond with gender-inclusive learning programmes, both in content and delivery, including measures to attract men into previously female-dominated training and careers. Faculty need to be gender-sensitive.
- 4.5 For the promotion of equal access of girls and women to TVE courses, more effective forms of educational and vocational guidance and counselling must be provided, along with gender-sensitive guidance and counselling materials. At the same time the learning and working environments must be made more suitable for the participation of girls and women, overt and covert bias and discrimination must be removed, and a positive image and appropriate incentives for female participation in TVE should be created.
- 4.6 To overcome the lack of employment opportunities for girls and women, and the misconception that they are incapable of performing particular tasks, TVE programmes emphasizing the development of their entrepreneurial capacity should be undertaken.
- 4.7 The journey through lifelong learning is burdensome for the disabled; the pathways are very rocky and difficult to negotiate. Their aspirations and achievements must be broadened. People with disabilities frequently have difficulty accessing TVE for a range of reasons. These include the under-estimation of educators and vocational guidance personnel of the ability and potential of people with disabilities to take up competitive paid employment. Those who are able to join mainstream TVE programmes should be assisted to do so while those with more severe disabilities should be provided with special programmes and learning strategies to realize their potential and optimize their participation in society and the work force.
- 4.8 The commitment to TVE for all requires well designed policies and strategies, increased resources, flexible and appropriate delivery modes, friendly training environments and sensitive and caring teachers and employers.

Theme 5: Changing roles of Government and other stakeholders in TVE

- 5.1 Although governments carry the primary responsibility for TVE, in a modern market economy TVE policy design and delivery must be achieved through a new partnership between government, employers, vocations, industry, trades union and society. This partnership must create a coherent legislative framework to enable the launching of a national strategy for change. Within this strategy the government, apart from actually providing TVE, can fulfil the roles of giving leadership and vision, facilitating, co-ordinating, establishing quality assurance and ensuring that TVE is for all through identifying and addressing community service obligations. The capacities of the partnerships must be enhanced through training schemes and facilities to impart appropriate skills.
- 5.2 The new partnership should aim to establish a learning culture throughout the society whilst strengthening the economy, achieving social cohesion, helping to maintain cultural identity and diversity and the enhancement of humanity. Training for all occupations directly related to human development should include human rights and responsibilities. The learning culture should enable the establishment and maintenance of an institutional structure which will achieve lifelong learning, wider participation in

education and training, and foster the work ethic with a revitalized spirit of entrepreneurship.

- 5.3 Both the monetary and non-monetary benefits of TVE should be recognized by government, industry and other stakeholders.
- 5.4 The contribution of the voluntary and NGO sectors to the provision of TVE must be recognized and supported because it constitutes an extremely valuable but often overlooked resource.
- 5.5 Government and the private sector must recognize that TVE is an investment, not a cost, with significant returns including the well-being of workers, enhanced productivity and international competitiveness. Therefore funding for TVE must be shared to the maximum extent possible between government, industry, the community and the learner. There are also opportunities for fund-raising and income-generating activities through collective effort. The mix will vary for each country, but it is important to realize that the benefits of TVE are for all of the partners in society who should therefore take the responsibility to contribute to the creation and ongoing vitality of their TVE system through cost sharing, incorporating appropriate government financial incentives.
- 5.6 A vibrant economy is best served by a diversity of public and private providers of TVE operating in healthy competition, within a national framework of quality assurance. The balance can be struck in many ways but the government should assume responsibility for ensuring strong basic initial vocational preparation no matter which sector is providing its delivery. Government should also be considered a provider of last resort to ensure that potentially excluded populations are not overlooked and are ensured access to TVE programmes. There is a particular need in all countries to expand employment-based training which is well articulated with institutional training through a national framework which includes individual learning credit banks and records, and multiple and flexible entry and exit points. The private sector has a particularly important role to play in this regard.
- 5.7 Within governments there are often shared and overlapping responsibilities for various elements of TVE amongst departments and agencies. It is desirable that governments streamline their own public institutional framework to the maximum extent possible to co-ordinate the national TVE effort, create an effective partnership with the private sector and promote TVE for the benefit of all stakeholders.
- 5.8 All TVE partners will be required to increase constantly their knowledge and expertise in many areas affecting TVE systems. Effective mechanisms must therefore be established to share experience and expertise through ongoing research of particular relevance for key policy issues. Other approaches may include jointly shared data banks, multi-media technologies, and regional and international co-operation.
- 5.9 There is significant scope for countries to share their experience with the design and operation of national TVE policies and strategies, and appropriate public and private roles and partnerships. In this regard there is a need for mutual and co-operative assistance between developing and developed countries and those countries with emerging market economies.

Theme 6: Enhancing international co-operation in TVE

- 6.1 There is an urgent need for more financial and technical support from international agencies for education, and Technical and Vocational Education in particular, to allow TVE to contribute more significantly to economic and social development.
- 6.2 Further co-operation is encouraged between UNESCO and its international partners such as the ILO, The World Bank and the Regional Development Banks, OECD, the European Union and CEDEFOP, the European Training Foundation, ISESCO, the Commonwealth, La Francophonie etc. to enhance TVE, with UNESCO assuming a co-ordinating role through its comparative advantage in the various fields of education.
- 6.3 There should be increased co-operation between the North and the South, as well as between countries of the South, to renovate and sustain TVE systems, including through research and development.
- 6.4 The needs of developing countries require specific recognition, particularly in areas such as investment in TVE, the provision of basic education including literacy and numeracy skills to facilitate access to TVE, the encouragement of ownership of TVE and the increase of their budget for TVE.
- 6.5 International financial authorities must recognize the contribution of education, and particularly TVE, to the maintenance of peace and stability and in preventing social dysfunction, and should incorporate the support of TVE in their conditions for assistance to recipient countries.
- 6.6 UNESCO's efforts to develop a strategy for TVE for the first decade of the twenty-first century are strongly supported. The UNEVOC network should be strengthened. Member States are encouraged to continue to underpin regional and national Centres which are essential vehicles for the achievement of the new vision for TVE in the twenty-first century. The Congress strongly recommends that UNESCO increases significantly the budgetary allocation for its TVE programme activities to ensure the successful implementation of the new strategy. To encourage such a revitalization of TVE in the new century, UNESCO should also consider the establishment of an international prize for innovation in TVE.
- 6.7 In the light of the new expanded vision for TVE, which has been endorsed at this Congress and which stresses the need for incorporating a new relationship between the various sectors of education and training, an holistic approach to the preparation for life and the world of work and increasingly seamless pathways in lifelong learning, the Congress recommends that the Director-General of UNESCO, in close collaboration with the ILO, develops a common concept of **Technical and Vocational Education and Training (TVET)**, to guide the UNESCO strategy for the twenty-first century.

**All participants and observers attending
the Second International Congress on Technical and
Vocational Education unanimously express their profound appreciation
to the Government and the people of the Republic of Korea and to
UNESCO for hosting and organising this event which was a crucial
milestone in the development of UNESCO's new vision for the
contribution of Technical and Vocational Education and
Training to life-long learning in the new millennium.**

ANNEXES

OPENING ADDRESS

Welcoming address by Mr KIM Dae-jung, President of the Republic of Korea

At the official luncheon for the heads of
delegations in the Office of the President

**Honorable Director-General of UNESCO, Mr Mayor,
Distinguished delegates from UNESCO Member States,**

It is a memorable day for the Republic of Korea and for me today. I have met so many people since I became the President, but I have never met so many distinguished representatives from all over the world at one place. I am much honored and pleased. On behalf of the people of the Republic of Korea, I welcome you all!

UNESCO has contributed a lot to equality among races, regions and sex. Furthermore, it has worked for the development of academia and culture, for the settlement of human rights and morality, and for progress in science and education.

There is great significance in holding the Second International Congress on Technical and Vocational Education in the Republic of Korea. I am informed that there are many more delegates attending this Congress than the first one held in Germany, with the theme of "Lifelong learning and training: a bridge to the future." It shows how important this topic is to meet the challenges of the future. Five days of sincere discussions will draw out great progress on the part of technical education.

The twenty-first century will be the era of knowledge, information and civilization. An individual's ability is no longer evaluated by which school he or she has graduated from. An individual ability is determined by his/her knowledge and creative ideas to produce value-added outcomes.

We are living in the world of unlimited competition under the system of WTO. The developed countries are faced with the wider gap between the rich and the poor, and the developing countries are getting poorer through harsh competition. The most important task to solve these problems is to equip people with vocational education and techniques to yield many highly value-added products.

Nowadays, it is not enough for school education to be adapted to the rapidly changing world. It is indispensable to be educated throughout life. Considering the current situation, it is important and also essential to gather at this Congress and exchange thoughts and experiences on technical and vocational education to ascend it in the global aspect.

The Republic of Korea has accomplished rapid and high economic growth in the past. The economy grew by more than 10 per cent every year. This was made possible through continuous job training and technical education to train highly qualified manpower. However, we are at a standstill in developing human resources adaptable to the new environment of a knowledge-

based society. We have to make a transition from a training system aimed at an industrial society to a system geared towards the knowledge and information society of the twenty-first century. It is a difficult step to take, and we are much concerned about it.

In order to meet the challenges, we plan to educate and train our people with the most updated knowledge and skills corresponding to the new surroundings. As a result, they may be able to make more profit in every sector that they are working at.

Our goal is a policy of providing vocational education and technology to everyone so that they may contribute to the knowledge-based society. I believe that all of us gathering here share the same goal. We can never over-emphasize the importance of international co-operation for the development of human resources. For the past fifty years, UNESCO has been working towards this end, and we think very highly of the contribution UNESCO has made. I earnestly pray for the success of the Congress, so you may take back suitable policy recommendations to your countries.

I know that some of you are from developed countries, but most of you are from developing countries. I believe that the developed states and the international finance institutes should introduce various policies to support and aid the underdeveloped countries. To live together harmoniously is the only way to live through the twenty-first century. We must build a strong collaboration link among states. In this sense, I, as the President of the Republic of Korea, am and will be trying my best to contribute to the world peace and people's welfare.

At the same time, the governments of developing countries must strive for education of their people. It is an obligation of the governments to provide their people with new knowledge and advanced skills to bring forth economic betterment.

Both the developed and the developing countries must reach a consensus to earnestly complete their jobs. It has to go both ways. The advanced countries and international organizations must become actively involved in helping the less advanced ones. Those of you from developing countries should make every effort to bring up well prepared manpower for the new era. In order to achieve this, the vocational and technical education has to be strengthened and widely spread out.

I hope that this Congress will be an opportunity to intensify the relationship among the participating countries and produce many good policy recommendations so you may all achieve what you strive for.

May you all have a pleasant and comfortable stay here in the Republic of Korea. The government of the Republic of Korea will assure you with whatever you need.

The Republic of Korea, once again, welcomes you as good friends and respectful colleagues, and wishes the Second International Congress on Technical and Vocational Education great success.

Welcoming address by Mr KIM Jong-pil, Prime Minister of the Republic of Korea

**Mr Mayor, Director-General of UNESCO,
Mrs Horiuchi, Assistant Director-General of ILO,
Delegates from UNESCO Member States,
Ladies and Gentlemen,**

It is a great honor and pleasure for Seoul to host the Second International Congress on Technical and Vocational Education. I would like to welcome you all on behalf of the government of the Republic of Korea, one of the co-organizers of this event.

I expect that this Congress, which is being held on the threshold of the twenty-first century, will promote vocational and technical education among all people and build worldwide partnerships.

First of all, I would like to express my sincerest gratitude to UNESCO which, in partnership with ILO, has made remarkable contributions to the development of vocational and technical education since 1954.

With the emergence of globalization and the information era, the international community has witnessed a tremendous paradigm shift. The knowledge-based society is at hand. It requires every citizen, in every field, to be equipped with the latest knowledge and vocational skills. Only when this is achieved will all citizens be able to successfully meet the challenges of the future society.

In this ever-changing era, the task of developing creative human resources on the basis of newly defined vocational and technical education has become the most urgent endeavour, not only for individual countries but also for the whole of human society.

Meeting the future challenges of the knowledge-based society depends on youth. Education and training in information and communication technology is the key to prepare the young to be leaders of the twenty-first century.

In addition, special attention should be given to disadvantaged groups such as the disabled, women and school drop-outs in providing vocational and technical education.

This is the most appropriate time for the UNESCO Member States to gather under the banner of 'Lifelong learning & training: a bridge to the future' in a quest to define the future directions and possibilities for vocational and technical education.

Ladies and Gentlemen from abroad and from the Republic of Korea,

This co-operative effort, aimed at developing and innovating vocational and technical education, will lay the foundation for the promotion of well-being and self-realization of the

mankind. Your dedication will, with no doubt, contribute to the strengthening of international co-operation, world peace and your countries' own prosperity.

Today, twelve years after the first Congress in Berlin, we have an opportunity once again, to share our diverse experiences, expertise and ideas in vocational and technical education through open discussions.

Again, I welcome you all who are visiting the Republic of Korea to participate in this Congress. I hope you have a very successful and fruitful Congress, and please enjoy the Republic of Korea in this very beautiful season of flowers.

Opening Address by Mr Federico Mayor, Director-General of UNESCO

**Mr Prime Minister of the Republic of Korea,
Honourable Ministers,
Distinguished Participants and Observers,
Ladies and Gentlemen,**

It is a great pleasure for me to welcome all the participants and observers from over 100 Member States to this Second International Congress on Technical and Vocational Education.

I should like to express UNESCO's profound gratitude to the Government of the Republic of Korea. Mr Prime Minister, your country has very generously supported this international event, in spite of the recent financial and economic crisis in your region. I am delighted that there are positive indicators that you are now over the worst and the economy is well on its way to recovery. Your country's strong investment in education, including technical and vocational education, was a decisive factor in its rapid socio-economic development. I am confident that this emphasis on education will also prove critical in the economic recovery. Once again, the example of the Republic of Korea demonstrates how important education is for development. Seoul is indeed a most appropriate venue for this Congress.

I believe this gathering will prove to be a landmark event on the eve of a new century. We meet today to determine how we are to equip young people and adults to face the new challenges that the twenty-first century is certain to bring. It is heartening that such a large number of countries, both developed and developing, are represented here. It is a clear indication of the growing importance attached to this vital sector of education, which has a central role to play in tomorrow's Information Society. This type of learning, ideally suited for the modern world, in fact dates back to the very beginning of recorded time. The remarkable feats of engineering and construction, and the beautifully crafted objects that have come down to us - and which are especially evident in Asia - bear ample testimony to this fact. This should make us reflect on the importance of technical and vocational education from the learning angle. So often we look only at the teaching angle. Yet the crucial aspect is the learner's capabilities and their fulfilment. By nurturing immense flexibility and intensive skills-learning, even illiterates can realise their full potential at the same time as they acquire basic education.

Ladies and Gentlemen,

As we approach the new millennium, we see how much remains to be done to give our young and future generations a better world to live in: a more peaceful society with a healthier, cleaner environment and a pattern of sustainable development which seeks to eradicate poverty. Education is the single most powerful means to improve the quality of life, the single most powerful weapon against poverty and intolerance. Education builds a culture of peace; it empowers human beings, both young and adult, to be effective in their chosen sphere of activity; education in its essence, opens doors to both personal and social development.

This is the last major meeting of a decade of international landmark meetings on education. What have they taught us? There was the Education for All initiative launched in Jomtien, Thailand in 1990 by UNESCO, with its partner agencies. In 1997, the Fifth World Conference on Adult Education in Hamburg proposed new strategies on providing life-long educational opportunities for adults. Last year in Paris, UNESCO organized the World Conference on Higher Education that developed a set of universal strategic guidelines for higher education. What we realise today even more clearly than in Jomtien, is the absolute centrality of education to development, the absolute inter-connectedness of all forms of education and the absolute necessity for political will in ensuring adequate educational opportunities for each child and adult in the world.

Much remains to be done! The imbalance between military spending and education spending in so many countries cannot be justified. The imbalance between education spending and overseas debt servicing cannot be justified. We are all called to account – the international community, the wealthy nations and the developing nations – all have to act to redress this situation. What is the role of technical and vocational educational provision in a world where hundreds of millions of children and adults lack even the most basic learning opportunities? Where youth unemployment, the trend to mass higher education and an “inflation” of qualifications, degrees and diplomas coincide? There is a strongly expressed need to discuss these questions. This Congress is UNESCO’s response to the many and frequent demands from our Member States for such a forum: to exchange views, to formulate effective national policies for technical and vocational education, to meet the fresh challenges of a new century. I believe that we are on the brink of a new maturity and vision for technical and vocational education and that it is rapidly becoming a central national concern.

Ladies and Gentlemen,

Technical and vocational skills empower young people and adults to play active roles in a development paradigm that seeks to narrow economic and gender disparities while preserving the integrity of the environment. In many countries, higher education enjoys great prestige, even as it struggles to provide skills matching employment opportunities. But at the same time, there is a lack of qualified technicians, skilled and semi-skilled workers, particularly in the developing countries. This imbalance in the education system is one of the more obvious obstacles to economic progress. It is no exaggeration to say that in the future, the backbone of robust social and economic development in a nation will be the technical professionals. Governments need to be more aware of the social and economic relevance of these skills and provide technical and vocational education with a commensurate share of social investment.

This is particularly important as countries adjust to the realities of globalisation. Not globality! Sadly, this is not a process of global sharing and solidarity. While we work for that true globality, we confront today’s interaction of globalisation and rapid technological development. It is dramatically changing the ways in which we live, learn, work or even think about work. It is changing the nature of work and the skills required in almost every occupation. The highly competitive global economy requires a productive and flexible workforce, able to adjust in a rapidly changing environment. It is a situation that is dramatically increasing the gap between the knowledge-rich and the knowledge-poor: nationally, regionally, and on the individual level. Therefore, providing access to learning and training throughout life is the only way we can arm people with the necessary knowledge and skills they require to live in a changing world.

To keep pace with changes in work organization and production technology, people need increasingly to renew and upgrade their skills. This calls for the integration of technical and vocational education into lifelong education systems. Indeed, technical and vocational education must articulate much more effectively with secondary, higher and adult education. In the developing world, particularly in rural areas, providing basic skills education is still a challenging task. The promotion of literacy alone, however, is not sufficient. Experience demonstrates that a combination of literacy education and vocational skills-learning is an effective method of empowering people to improve their standard of living. The inclusion of vocational subjects in the general education curricula equips students with basic technological and vocational knowledge and awareness. The integration of vocational skills training in general education is also likely to contribute towards gender equity in the technical professions.

Ladies and Gentlemen,

I cannot overemphasise the significance of this approach for social cohesion. The influx of people from rural areas to already crowded urban centres is a phenomenon we have witnessed in recent years, particularly in the developing nations. These migrants usually live in unacceptably poor conditions, associated with high rates of unemployment and crime. Technical and vocational education in rural areas may limit such migrations by providing agro-technology and entrepreneurial skills training, generating increased agricultural production and the establishment of small enterprises. In both developed and developing countries, urban youth unemployment is a major source of concern to governments. School drop-outs, children of severely disadvantaged families and demobilised soldiers in countries in post-conflict situations have little or no access to either formal or non-formal education.

If all the citizens, but particularly those initially excluded from the mainstream of education are not provided with flexible access to learning and training opportunities throughout life, especially in income generating technical and vocational skills, the vicious cycle of unemployment and social exclusion is likely to keep repeating itself. There is a debate on the extent to which technical and vocational education creates jobs. But there is broad agreement that it gives people the knowledge, skills and work ethic that equip them better for wage-employment, self-employment, re-employment and even informal business initiatives. In the entirely new approach of life-long education for peace and development, technical and vocational education plays a unique and critical role.

It is for all these reasons that UNESCO has convened this Congress and provided you with a forum to construct policy orientations for the future of this sector of education. Education and training processes in the technical and vocational field undoubtedly need to be renovated. The new information and communication technologies must be better exploited to deliver education and training in a more flexible manner. At the same time, we must not overlook the widening gulf between the industrialised and the developing nations in these technologies. These technologies have the potential to facilitate the widespread delivery of quality technical and vocational education programmes, particularly in developing countries. They may also be mobilised to improve the equal access of girls and women to this branch of education. In the interdependent world of today, it is in the interests of the industrialised countries to provide technical and financial resources to the developing world to improve their technical and vocational education. Technological developments in computers and tele-communications increase the returns on investment in education. These same developments also increase the cost of failing to make that investment.

Within the education system, technical and vocational education has the closest link with the world of work. Educators in schools must not be the only players in this sector of education: other stakeholders such as industry, employees and employers are all expected to play an active role. It is obvious that without their involvement, technical and vocational education will be unable to address the employment needs of the future. Indeed, in many countries, the private sector's involvement in technical and vocational education is being encouraged in order to mobilise greater financial resources and to improve the efficiency of the system. Nevertheless, it is our firm belief that governments should not withdraw from their responsibility of orchestrating the technical and vocational education system.

Without the government's leading role in policy-making, co-ordinating, financing and standard setting, the goal of life-long technical and vocational education provision would not be reached. I am very happy indeed to note that we have not only technical and vocational education experts here. We also have amongst us representatives of industry and business, teachers' organizations and trade unions. With all these players and partners involved in the discussions during the next few days, I am very confident that you will make valuable recommendations to both Member States and UNESCO on the future orientations of technical and vocational education.

Ladies and Gentlemen,

UNESCO has a long history of commitment to technical and vocational education, promoting this sector since the 1960s. In 1992, the Organization launched its International Project on Technical and Vocational Education (UNEVOC) with generous support from Germany. The Republic of Korea, France, Japan, Australia and others have also contributed significantly to UNESCO's efforts to strengthen technical and vocational education systems in our Member States. This assistance has taken the form of meetings, training activities, information and materials dissemination and the creation of the UNEVOC network. Today this network links 192 institutions in 128 countries.

We now expect this Congress to submit to UNESCO clear recommendations on how technical and vocational education needs to be adapted to address effectively the employment challenges of the early years of the next century. The Congress is only the first step. Concrete actions involving all partners must follow rapidly. UNESCO will play its leading role in technical and vocational education development by launching a new long-term programme from the Year 2000. We shall expand our activities and allocate more financial resources to this field. The Government of Germany has made a generous offer to host an inter-agency information clearing house for UNESCO's new programme in technical and vocational education.

The objective of the new programme is to improve the national capacities of our Member States by providing policy advice and information and strengthening international cooperation. We are all aware of the disturbing fall in overseas development aid in recent years. Investment in education in the developing countries has not escaped this general squeeze in resources. While governments in the industrialised countries provide their schools with Internet links, children in developing countries lack even pencils and paper. We all know the cost of depriving these children of an education. But let me tell you that the tragedy is much greater than the statistics indicate. This situation is an indictment of the frequent lack of political will in both developed and developing countries.

Because of the brutality of ethnic extremism, many people are today expelled from their homeland. Because of the brutality of inhuman living conditions, hunger and misery, thousands of people are – less visibly! – being expelled every day from their homeland. It is the result of a lack of solidarity, of not honouring the wise resolutions of the United Nations, starting with the General Assembly Resolution of 1974 on the support of the developed countries to the developing ones with 0.7% of their GNP, and, more recently, with the commitments of the Social Development Summit in Copenhagen. Instead, a loans-based system has been applied, with the result of widening the gap between the rich and the poor. With flows of capital from abroad, equipment from abroad, engineers from abroad, very meagre transformations have taken place at home!

The net result, at the end of the day, at the end of the century, is an immense debt that makes impossible, even for countries with good natural resources, the take-off of their economies. How can they take off with 40% of their budget devoted to debt service? The result is instability, unrest, emigration. If really we want to prevent massive social disruptions and uncontrolled flows of immigrants, we must act now, with radical measures to increase the percentage of our GNP for international cooperation. Now, with intensive skill learning – in the rural areas too - with technical and vocational education for all. Now, with the swap of a percentage of foreign debt for education, technical and vocational education, health.

I make a solemn appeal for renewed political and financial commitment to education, and particularly technical and vocational education by the governments of Member States, bilateral and multilateral agencies. I strongly urge the governments of our Member States, inter-governmental organizations, non-governmental organizations and the development banks to join UNESCO's efforts to renew commitment to education. Global action is needed as a matter of extreme urgency. Renewed political commitment on the part of all governments must lead to increased assistance for education in developing countries. Debt relief must be provided in exchange for local education initiatives. Intergovernmental organizations and development banks must promote a sustainable development paradigm in which education has a central role. We have to learn to care, share and dare if we are to make technical and vocational education an effective tool for reaching the goal of peace and development.

Ladies and gentlemen,

In conclusion, I would like to recall the role of King Sejong, who ruled Korea nearly six centuries ago and who showed he understood the value of literacy and education when he devised the Korean alphabet. His precious gift enabled the Korean nation to achieve great cultural and scientific development. To commemorate this gift UNESCO awards every year the UNESCO King Sejong Literacy Prize for outstanding achievements in the area of literacy. Today we must follow the example of King Sejong and provide all our children with the opportunity of receiving an education which includes technological knowledge and life skills. We must let a global perspective guide our grass-roots actions. Let us make this Seoul Congress a real milestone in helping people to build a more peaceful and more prosperous future through lifelong learning and training.

Congratulatory address by Mrs Mitsuko Horiuchi, Assistant Director-General, ILO

**Distinguished Ministers,
Ambassadors,
Mr Director-General,
Ladies and Gentlemen,**

It gives me special pleasure to address this Congress on behalf of the International Labour Organization. Mr Juan Somavia, our new Director-General, whom many of you knew as the architect of the Social Summit, held in Copenhagen in 1995, wants me to convey his personal greetings to you. He is very sorry that pressing duties in Geneva prevent him from being here to speak to you himself.

UNESCO-ILO cooperation goes back a long way. It has been especially visible in respect of the protection of teachers' rights. But it was our two organizations' expanding activities and fruitful collaboration in the areas we have come here to consider this week that inspired the signing 45 years ago (!) of our "Memorandum of understanding on technical and vocational education". More recently, UNESCO's initiative in establishing the UNEVOC Centre in Bonn is also receiving the support of ILO. Moreover, ILO technical specialists will be participating in several sessions of the Congress.

We meet at a critical juncture in the history of this region, in a country whose economy has been hard hit by the Asian financial crisis. The Republic of Korea has reacted by devoting substantial resources to training. In the manufacturing sector the slow-down has left many workers in need of new skills. The Government is seeking ways to equip them for jobs in knowledge-based sectors, such as information technology. It has begun a thorough-going review, with ILO assistance, of training policies and programmes for the unemployed.

The transformation of training systems, as undertaken by the Republic of Korea, is part of a wider ILO approach to training for employment. ILO's efforts to develop a more adaptable labour force target smoother transitions from school to work; public/private sector partnerships for the delivery of training; and the promotion of lifelong learning.

Demand for skilled labour has risen significantly as a result of globalization and changes in technology and the organization of work. The three are closely linked. In many developing countries, the decade of soaring growth notwithstanding, workforces are hampered by low levels of formal education and training.

The world leaders who came together at the Copenhagen Summit realized that globalization had put new demands on workers to adapt their skills to the needs of a dynamic labour market. Jobless workers, they understood, could only take advantage of open economies if they could modernize the skills they had and, in most cases, acquire new ones. The Asian financial crisis has brought that message home even more forcefully. Paltry wages and scant social protection offer no hope of national prosperity. Prosperity lies in greater labour productivity, and that comes from flexible and responsive systems of training.

The financial crisis has reminded us of economic and social *fundamentals*. Last year, Members of our Organization – governments, employers and workers, adopted a solemn *Declaration on fundamental principles and rights at work*. The Declaration obliges all ILO Member States to embrace and promote the fundamental rights in our “core” Conventions.

Three areas these cover – freedom of association, child labour and discrimination at work – have direct relevance to the ILO’s vision of human resources development.

Participants, this year, at our Asian Consultation on Follow-up to the Social Summit, agreed that effective human resources development can *only* be achieved through full involvement of Governments, employers and workers. And that takes freedom of association.

Secondly, when parents’ skills are upgraded to allow them to re-enter the job market, their children no longer have to go to work.

Finally, training cannot be confined to particular social groups. Effective training must be freely available to women and to society’s most vulnerable members on a non-discriminatory basis. These reflect our core values embodied in the new ILO Declaration, which I referred to.

The ILO’s Human Resources Development Convention, No. 142, obliges Governments to take steps to answer the training needs of young persons and adults in all sectors of the economy and at every level of skill and responsibility. The Republic of Korea is one of four countries in Asia and the Pacific to ratify this convention.

But Governments alone cannot meet all the training needs of a global economy. The role of the private sector has become increasingly important.

And workers too must play an active role in determining and fulfilling their own training needs. Lifelong employability means lifelong learning.

Concluding my remarks, again I wish to stress the crucial importance of partnership among major stakeholders in training and education. This is much more needed in an ever rapidly changing world and increasingly globalized economy accompanied by fast-paced technological progress.

I wish you every success in your endeavour.

Opening remarks by Mr LEE Hai-chan, Minister of Education, Republic of Korea, and President of the Congress

**Honorable Mr Mayor, Director-General of UNESCO,
Mrs Horiuchi, Assistant Director-General of ILO,
Distinguished guests,
Ladies and Gentlemen,**

This is my greatest joy to welcome all of you to the Republic of Korea to attend the Second International Congress on Technical and Vocational Education.

It has a great significance that this Congress is being held at the end of the century, preparing for a new one. As you are well aware of, industrial society is being replaced by the knowledge-based society. This means a change in the paradigm of technical and vocational education. This Congress has another important significance for the Republic of Korea - this is the hundredth year that a formal technical and vocational education was launched here.

We are about to step into a new era of unprecedented changes as national boundaries disappear and globalization proceeds. A new paradigm of economy is formulated as intellectual capital such as knowledge, technology and information replaces tangible and physical assets.

In the light of rapid changes, we are all confronted with new challenges and we must prepare ourselves to survive through the new era. The future jobs will require more diverse vocational abilities and knowledge, calling for educational reform and a guaranteed system of lifelong education for all. This is a common issue and a central task for all of us here today and I am confident that the outcomes of this International Congress will benefit us with a new direction as we strengthen international ties among the Member States.

Distinguished Delegates,

No time could be more appropriate than the turn of the Century and the dawn of a new millenium, the timing for such a historically important event as this Congress which will provide a new direction for UNESCO's technical and vocational education and training programmes.

During the Congress, all of us will play a pivotal role in formulating policy recommendations. This, surely, is no easy task though we fully acknowledge the importance of vocational education in meeting the challenges of the new Information Age. Our actions and recommendations here today will affect not only us but also generations to come.

The major theme to be discussed during the Congress is "the changing demands of the twenty-first century." Under this theme, many related topics are debated such as 'improving system providing education and training throughout life', 'innovating education and training process', 'TVE for all', 'changing roles of government and other stakeholders in TVE', and 'enhancing international co-operation in TVE'.

As all of you here are experts in the field of education, or other related areas, I am confident that your creative ideas will greatly contribute not only to the socio-economic development of each Member State, but also to the prosperity of mankind as a whole.

Finally, I wish all of us will benefit from the outcomes of this Congress. May you all have a pleasant stay with us here in the Republic of Korea.

CLOSING REMARKS

Closing Address by Mr Colin N Power, Deputy Director-General for Education, UNESCO

**Mr President,
Honourable Ministers,
Ladies and Gentlemen,**

I should like to begin by expressing, on behalf of the Director-General of UNESCO and on behalf of all the participants, our heart-felt thanks and gratitude to His Excellency the President of the Republic of Korea, to His Excellency the Prime Minister, to Your Excellency the Minister of Education, our President, and your staff, particularly in your Ministry and the National Commission for UNESCO, the President and staff of the Korea Research Institute for Vocational Education and Training (KRIVET), and to the people of the Republic of Korea as a whole for the wonderful way in which they supported the organisation of this Congress with their hospitality.

The Republic of Korea has generously made available to this Congress the fruit of their endeavour to build a modern society, one which has all the necessary pillars for meeting the challenges of the 21st Century.

The most important pillar among these is education, including technical and vocational education. What we have just seen in the Republic of Korea, and particularly, in the splendid Congress Exhibition and on our Study Visits, makes us believe that we can, given the appropriate and enabling environment, still perform miracles.

Ladies and Gentlemen,

The theme of our Congress has been Lifelong Learning and Training: a Bridge to the Future. Seoul itself is a city of bridges: more than 14 span the Han River, all of them built since the mid 20th century as this ancient city expanded rapidly on both sides of the river.

Vestiges of the past remain. Thankfully, the Republic of Korea has preserved its rich cultural heritage. Part of the heritage is the Confucian tradition of respect for the scholar.

From the west we also have given high status to the world of the academic: in both societies, students and their parents focus on getting into a prestigious university.

Yet, as this Congress has shown, the ancient tradition is not enough. As the Report of the International Commission on Education for the 21st century, the Delors Report, has stressed, the bridge to the future must be supported by four pillars, learning to know, learning to do, learning to live together and learning to be.

The information society of the 21st century will put greater value on learning to do on the skills and competencies needed to put knowledge into action.

Thus, as a result of this Congress, the balance amongst the pillars will begin to be restored and our bridge to the future strengthened so that education and training in all their dimensions can play its proper role in national and individual development.

As the Director-General implied in his opening speech, *Seoul is the most appropriate venue for this Congress because the Republic of Korea has proved beyond any doubt that education, including technical and vocational education and training, is a decisive factor in development.*

Ladies and Gentlemen,

This Congress is another milestone in UNESCO's effort to deal with all aspects of education that are of major concern to its Member States. We started the decade with the World Conference on Education for All in Jomtien, in 1990, to address the issues of access and quality in basic education.

We organised in 1994 the Salamanca Conference on Special Education to deal with an area of education that affects millions who are in dire need of education and training. In 1997 we organised in Hamburg the Fifth Adult Education Conference which addressed the problem of illiteracy and adult lifelong learning. Last year, we organised in Paris the Higher Education Conference which underlined the urgent need for the universities to face the challenges that are posed by the revolution in technology. It developed strategic guidelines for higher education.

You can see in all these major conferences one common thread: the determination of UNESCO and its Member States and other partners to create a lifelong learning inclusive society where every individual, young or old, man or woman, can have access to knowledge and skill training that will help one improve the quality of one's life and that of one's family.

This Congress was planned to complete the series of major conferences in the decade. It has done so very successfully as we have just heard from the Rapporteur-General.

It can truly be considered a landmark event. Today, more than ever before, technical and vocational education and training has become a necessity not only for young people who will have to prepare themselves for the challenges of the next century, but also for the entire population of each country so that every individual can play an active role in the world of the 21st century that seeks to narrow economic and gender disparities while preserving the integrity of the environment.

The Congress has provided all of us with the opportunity to exchange views and experiences. In addition to the scheduled activities, many informal consultations have taken place.

For example, the Director-General and I have met with all the Ministers of Education, Heads of Delegation, NGOs and IGOs on the need for the continuity of reforms of education including technical and vocational education and training, and financial and technical support needed for reformulating their strategies, for improving the quality of education and training, and for negotiating assistance and loan packages with donors.

On behalf of the Director-General I wish to reiterate UNESCO's commitment to working with all Member States, sister agencies and the civil society for a better future.

In this regard I would like to appeal to all partners of UNESCO to intensify their support to all developing countries, particularly in the domain of technical and vocational education and training where the need is the greatest.

Ladies and Gentlemen,

We have certainly had a very successful Congress. We should all be proud of what we have been able to achieve in five days. However, the most formidable challenge we have to face when we go home is the follow-up to this Congress. UNESCO, on its part, will do everything within its fields of competence to assist its Member States. We shall continue to work very closely with all our partners.

For the Member States of UNESCO, there is an urgent need to renew TVET. This should be the top priority for every country.

As the Prime Minister of the Republic of Korea said in his opening speech, *“the task of developing creative human resources on the basis of newly-defined vocational and technical education has become the most urgent endeavour not only for individual countries but also for the entire human society”*.

This is a task that cannot be accomplished by the Government alone. The private sector, the non-governmental organisations and other stakeholders have a crucial role to play.

This is a task that can only be accomplished if a country can succeed in articulating TVET with its system of education within a framework of an overall sustainable development strategy.

This is a task that can only be achieved through partnerships and alliances - national, regional and international.

UNESCO is aware of the complexity of the issues involved in this task. They include the lack of adequate resources in the majority of developing countries, the problems of debt, poverty, illiteracy, out-of-school children, the marginalized and the excluded, the handicapped, the problem of imbalance between education and defence budgetary allocations, the problems of armed conflicts and civil strife in many countries around the world. These are real problems.

As the excellent synthesis given by our Rapporteur-General, Professor Kenneth Wiltshire stressed:

What is needed is a strong political will to overcome these problems in order to be able to move forward. We have to have the determination to fight disadvantage and exclusion to help people achieve their potential.

We need to embrace the challenges and the opportunities of information technology.

We need to open up learning and training opportunities at work, in the community, and in people's homes.

We need to invest in the appropriate strategies that will ensure that technology does not become another medium for division and exclusion neither within the same country nor between countries.

We have to be creative, imaginative and innovative in a manner that surpasses present resource levels, institutional structures, curricula and conventional delivery systems while building on the best in current practices.

We were also very pleased to have been closely associated with the International NGO Forum which KRIVET most competently organised with the help of the UNESCO Secretariat, and which was held on Tuesday, 27 April here. It was well attended and the presentations and discussions were of considerable interest, as were the recommendations adopted there which, as you know, have now been incorporated into the main Congress documentation.

Let me also thank our extended family of UNESCO National Commissions, sister agencies and NGOs for their help, especially those like the Government of the Republic of Korea, Norway, ISESCO, Australia, ACCT and ALCATEL who supported the participation of many delegates from developing countries.

On behalf of the Director-General and on my own, I wish to express our heartfelt thanks to the Administration of the International Conference Centre and to their staff for the efficient way they have organised this Congress.

I also sincerely thank the President and Vice-Presidents of the Congress, and most especially the Rapporteur-General, Professor Kenneth Wiltshire, the Chairs of the 4 Commissions and their Rapporteurs, for all their valuable contributions to the Congress.

Sincere thanks and gratitude are due to all my own UNESCO staff who have worked so closely and well with the KRIVET team for several months to make the convening of this Congress possible. Special thanks go to our splendid team of translators and interpreters, and all those who worked behind the scenes to enable this Congress to run so smoothly.

Tomorrow, when we return home, we must send a clear message, with the help of our friends in the media, to our governments and citizens that, and I quote from your recommendations:

“Technical and vocational education is among the most powerful instruments for enabling all members of the community to face new challenges and to find their roles as productive members of society”.

Mr President,

You may be sure that I will immediately discuss your recommendations with the Director-General and send them to all Member States and our partners in development, particularly ILO, as we move towards a joint policy. Your recommendations, which I fully endorse, will be taken into account as we reformulate UNESCO’s Global Strategy for Technical and Vocational Education and Training, TVET, to guide our programme for the 21st century. We will submit these to the General Conference.

In conclusion, I would like to call on all participants to work with us to build a bridge to the future, by assuming our responsibility for making sure that there is a coherent and adequately funded technical and vocational education and training strategy in our own organisation or country, that our vision becomes a reality.

Kamsa ham nida, Merci and Thank you.

Closing remarks by Mr LEE Hai-chan, Minister of Education, Republic of Korea, and President of the Congress

**Honorable Deputy Director-General for Education of UNESCO,
Assistant Director-General of ILO,
Participants of UNESCO Member States,**

I am very pleased to note that the Second International Congress on Technical and Vocational Education co-organized by the Government of Republic of Korea and UNESCO has progressed most satisfactorily in line with concerns.

I would like to express my appreciation of your discussion and exchange of ideas about the future of the Technical and Vocational Education and about the direction of new policies for the twenty-first century.

With the closing of the five days of the Congress, it is time to review the results of the past and the tasks ahead.

The Seoul Congress has been meaningful in that we have been able to share experiences and wisdom from each country for the future of the technical and vocational education.

As you know, the theme of this Congress is "Lifelong learning and training: a bridge to the future". Education that is continued beyond school, learning in all areas during one's whole life, will be appropriate for the coming new era.

In keeping with this meaningful theme, we have made some recommendations for UNESCO Member States and for UNESCO itself.

First of all, we have recommended that each Member State establish an open and flexible trainee-oriented system to cope with the globalization, restructuring and liberalization of economy.

Also, we have recommended that Member States effectively organize educational resources such as curriculum, facilities, and contents so the technical and vocational education can be for all, including the disabled and the weak in the society. To achieve these goals, each government should make efforts to establish new training institutes and operating mechanism.

Next, I would like to summarize the task assigned to UNESCO. UNESCO should establish the mutual connection system and support its development in co-operation with ILO. Furthermore, UNESCO should support the evolution of technical and vocational education and the development of government policies and reinforced the international co-operation in technical and vocational education through the UNEVOC network among the Member States.

Guidelines for the integration of vocational education and general education are needed so that technical and vocational training becomes a basic component for the education and training

system in each country.

With operating model project for women and neglected groups, UNESCO should support the drafting of legislation for technical and vocational education in each Member State.

It is suggested that UNESCO make use of programme for achieving efficiency of learning by utilizing information technology.

This Congress has taken place some ten years after the First International Congress on Technical and Vocational Education met in Berlin (1987) and drew conclusions for policy-making. The Seoul Congress has been bigger than its predecessor, bringing together more participants and increasing international co-operation in the area of technical and vocational education.

Now, that the Congress is drawing to an end, I expect that you, the participants, will go home and put into practice the various excellent technical and vocational education policies recommended here in your own countries.

Finally, I would like to express my appreciation to all of you, who participated in this Congress, as well as to the president of KRIVET and UNESCO staff who have done so much to make this Congress a success.

I wish you all the best of luck, and I hope you have had a memorable time during your stay in the Republic of Korea.

Programme of the Congress

Monday 26 April 1999

09:00-09:50

Opening ceremony

Welcome address	Mr Kim Jong-pil, Prime Minister of Republic of Korea
Opening address	Mr Federico Mayor, Director-General of UNESCO
Congratulatory address	Mrs Mitsuko Horiuchi, Assistant Director-General, ILO

09:50 - 12:30

Plenary 1

Theme 1: The changing demands of the twenty-first century: challenges to technical and vocational education

Chairperson: Mr Lee Hai-chan (Republic of Korea)

Introductory remarks	Mr Colin N Power, Deputy Director-General for Education, UNESCO
Opening remarks	Mr Lee Hai-chan, President of the Congress
Keynote speech	Mr Munther Al-Masri, President, National Centre for Human Resources Development, Jordan

Chairperson: Mr Robert Gregory (Jamaica)

Presentations on the outcomes of the 5 regional preparatory conferences conducted prior to the Congress

Mr Wanjala Kerre
Professor, Moi University, Kenya

Mr Sulaiman Al-Jassim
Director, Community Relation & Manpower Development
Higher Colleges of Technology, United Arab Emirates

Mrs Madeleine Woolley
Director, Adelaide Institute of TAFE, Australia

Mr John Papaconstantinou
Vice-President, Organisation for Vocational Education and Training (OEEK), Greece

Mr Martin Miranda
Co-ordinator of Technical & Vocational Education,
Ministry of Education, Chile

14:30 - 17:30

Plenary 2

Theme 1 continued

Chairperson: **Mr Andras Benedek (Hungary)**

Keynote speech: Mr Hermann Schmidt

Former President, Federal Institute for Vocational Training (BIBB), Germany

Development of relevant TVE policies for the 21st century: Presentations on the perspectives from governments, industry and other stakeholders of TVE

Mr Seddou Cisse
ISESCO

Mr Ali Alghafis
Vice-Governor, General Organisation for Technical Education & Vocational Training,
Saudi Arabia

Mr Sang-Ha Kim
President, Korea Chamber of Commerce & Industry
Republic of Korea

Mr Tian-bao Zhang
Vice-Minister of Education, China

Mr Jean-Paul de Gaudemar
Recteur de l'Academie de Toulouse, France

Mr Ruy Berger Filho
Ministry of Education, Brazil

Mr Patrick Bourrier
Vice President, International Affairs, ALCATEL, France

Mr Timo Lankinen (representing Nordic countries)
Director for Vocational Education and Training
Ministry of Education, Finland

Mr Pedro Daniel Weinberg
Director, CINTERFOR/ILO

Panel debate on future orientation of TVE

Facilitator: Mr Muhammad Ashraf Qureshi
UNESCO Consultant

Panellists: Mr Claudio de Moura Castro
Chief, Social Programme Division
Inter-American Development Bank

Mr Arun K Mishra
Director, Pandit Sunderlal Sharma Central Institute of
Vocational Education, India

Mr David Fretwell
Senior Employment/Training Specialist
World Bank

Tuesday 27 April 1999

Commission I

Theme 2: Improving systems providing education and training throughout life

Co-Chairpersons: Mr Munther Al-Masri (Jordan)
Mrs Marianne Nganunu (Botswana)
Rapporteur: Mr Wanjala Kerre (Kenya)

Commission II

Theme 3: Innovating the education and training process

Co-Chairpersons: Mr Hermann Schmidt (Germany)
Mr Ali Alghafis (Saudi Arabia)
Rapporteur: Mrs Madeleine Woolley (Australia)

Wednesday 28 April 1999

Commission III

Theme 4: TVE for all

Co-Chairpersons: Mr C K Basu (India)
Mr Andras Benedek (Hungary)
Rapporteur: Ms Di Booker (Australia)

Commission IV

Theme 5: Changing roles of government and other stakeholders in TVE

Co-chairpersons: Mr Ihron Rensburg (South Africa)
Mr Ullah Khan (Pakistan)
Rapporteur: Mr Ahmed Ferej (Kenya)

Thursday 29 April 1999

09:30 – 12:30

Plenary 3

Reports of Commissions' Work

Chairperson: **Mr Hussein Kamel Bahaa Eldin (Egypt)**

Report of Commission I Mr Munther Al-Masri (Jordan)

Report of Commission II Mr Hermann Schmidt (Germany)

Report of Commission III Mr C K Basu (India)

Report of Commission IV Mr Ihron Rensburg (South Africa)

Theme 6: Enhancing international co-operation in TVE

Chairperson: **Mr Gerassimos Sapountzoglou (Greece)**

Keynote speech Mr Colin N Power
Deputy Director-General for Education, UNESCO

Perspectives from UNESCO's partners and Member States

Mr Ulrich Hillenkamp
Deputy Director
European Training Foundation

Mr Nicolai Petrov
Chief, Technical Co-operation Team in
Employment and Training, ILO

Mr John Middleton
Senior Education Adviser
World Bank

Mr Hamidou Arouna Sidikou
Directeur de l'éducation et la formation technique et
professionnelle, Agence de la Francophonie

Mr Michel Carton
Working Group for International Co-operation in
Technical and Vocational Skills Development

Ms Emily Vargas-Baron
Deputy Assistant Administrator
US Agency for International Development, USA

Mr Hermann Muller-Solger
Division Director, Federal Ministry of Education, Science,
Research and Technology, Germany

Mr Mohamed Al-Aswad
Ambassador, Permanent Delegate to UNESCO
Libyan Arab Jamahiriya

Ms Anne Therese Ndong-Jatta
Minister of Education, Gambia

Mr Hussein Kamel Bahaa Eldin
Minister of Education, Egypt

Friday 30 April 1999

09:30 – 12:30

Plenary 4

Special Theme: Technical and vocational education in the Republic of Korea

Chairperson: Mr Andras Benedek (Hungary)

Presentations Mr Lee Mu-keun President, Korea Research Institute For
Vocational Education and Training

Star Corp. Mr Kim Yong-sun, Advisor, Lucky-Gold

University Mr Kim Tae-gi, Professor, Danguk

Reports and Recommendations

Chairperson: Mr Lee Hai-chan (Republic of Korea)

Rapporteur-General's oral report Mr Kenneth Wiltshire (Australia)

Adoption of the Recommendations

12:30 – 13:20

Closing ceremony

Video wrap-up show

Closing speech Mr Colin N. Power, Deputy Director-General for Education,
UNESCO

Closing remarks Mr Lee Hai-chan, President of the Congress

List of Documents

I. Working documents (E/F)

ED-99/COTVE/1	Agenda
ED-99/COTVE/2	Rules of Procedure
ED-99/COTVE/3	Main Working Document: <i>The changing demands of the twenty-first century: Challenges to technical and vocational education</i>

II. Information documents (E/F)

ED-99/COTVE/INF.1	General Information
ED-99/COTVE/INF.2	Suggestions concerning the Organisation of the Work of the Congress
ED-99/COTVE/INF.3	List of Documents
ED-99/COTVE/INF.4	Provisional List of Participants

III. Reference documents (E/F)

ED-99/COTVE/REF	Reference Documents
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- *Providing life-long skill training through an integrated education and training system: the Australian experience*
- *Promoting equal access of girls/women to technical and vocational education*
- *The changing role of government and other stakeholders in vocational education and training*
- *The role of vocational education and training in transition countries: The case of Central and Eastern Europe and the New Independent States*
- *Strategies for vocational guidance in the twenty-first century*
- *Reform and innovation of technical and vocational education in the Republic of Korea*

List of Round-tables

Tuesday 27 April 1999 (18:00 – 20:00)

PROMOTING LINKAGE BETWEEN TVET AND ENTERPRISES

Department of Employment, Training and Industrial Relations (DETIR)
Queensland Government, Australia

YOUTH TRANSITION FROM SCHOOL TO THE WORLD OF WORK

UNESCO International Institute for Educational Planning (IIEP)

The future of work and adult learning

UNESCO Institute for Education (UIE)

Technical education between conventional structures and modern means

Islamic Educational, Scientific and Cultural Organisation (ISESCO)

Wednesday 28 April 1999 (18:00 – 20:00)

Training for employment in countries emerging from crises: local initiatives and international support

International Labour Organisation (ILO)

ILO International Training Centre

Working Group for International Co-operation in Technical and Vocational Skills Development

Flexible delivery of technical and vocational education and training

The Commonwealth of Learning (COL)

The British Council

Challenges for vocational education and training in countries in transition

European Training Foundation (ETF)

International NGO Forum on Technical and Vocational Education

27 April 1999, 9:00-17:30

**within the context of the Section International
Congress on Technical and Vocational Education**

(26-30 April 1999, Seoul, Republic of Korea)

The International NGO Forum on Technical and Vocational Education was held on 27 April in the Congress Centre, organized jointly by KRIVET and UNESCO with the sponsorship of the Ministry of Education, Republic of Korea and UNDP.

The main theme of the Forum was “Strengthening NGO’s role in developing technical and vocational education and international co-operation between NGOs”. In his opening speech, Mr Power, Deputy Director-General for Education, UNESCO, said that “the outcome of the main Congress, of which this International NGO Forum is an important part, will certainly involve concrete follow-up and implementation plans in which partnerships with NGOs and the private sector will be of the essence, as the role of TVE itself is redefined and reshaped for the 21st century”.

The Forum discussed ways of strengthening their activities and examined the possibility of establishing an international co-operative network for the further development of technical and vocational education in each society. Five speakers and 4 designated discussants were invited to the Forum and included both representatives of NGOs and UNESCO (Headquarter and Field Office).

The Forum was well attended, with approximately 120 participants, comprised of some 63 Korean national organizations, 45 representatives of around 20 international and regional NGOs, plus 6 UNESCO and other UN staff, and four representatives of UNESCO National Commissions and Member State delegations.

At the close of the Forum, a set of recommendations was adopted which have been handed over to the Rapporteur-General of the Congress. The document containing these recommendations was included in those adopted at the close of the Congress.

These recommendations reflect the concern of the above 120 Forum participants to ensure “new partnerships among NGOs, governments, professional association, trade unions and employer in order to improve technical and vocational education and training.” The recommendations also urges UNESCO to “implement its new approach to co-operation with NGOs in order to strengthen and facilitate the functioning of NGOs working in accordance with the Organization’s aims and field of competence”.

To obtain a copy of the Recommendations adopted by the Forum, please contact:

Section for International NGOs and Foundations
Bureau for External Relations
UNESCO
7, place de Fontenoy
75352 Paris 07 SP, France

LIST OF PARTICIPANTS/LISTE DES PARTICIPANTS

Member States/Etats membres

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Chief Participant: M. Ethem RUKA
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Ministère de l'Education et de la Science

M. Maksim KONINI
Responsable du Département de l'Enseignement
Professionnel, Ministère de l'Education et de la
Science

Algeria/Algérie

Chief Participant: Mr. Brahim HAMROUCHE
Director of Studies, Higher Council of Education

M. Diamel FERROUKHI
Enseignant, Université d'Alger

Mr. Mohamed MEHAYA
In Charge of Studies and Synthesis, Higher Council
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Mr. Mohamed DJAHDOU
Chief of Department, General Direction of Budget,
Ministry of Finance

Mr. Mourad SADOU
Director General, Center of Studies and Research
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Mr. Achour SEGHOUBANI
Director of Assessment, Orientation and
Communication, Ministry of National Education

Mr. Mohamed ABDELAALI
Director of Technical Secondary Education,
Ministry of National Education

M. Mohamed HADJ-DJILANI
Directeur, Centre National d'Enseignement
Generalisé

Mr. Smain BALAMANE
Director of Planning and Development, Ministry of
Higher Education and Scientific Research

Mr. Ahmed BOUTACHE
Ambassador, Embassy of Algeria in Seoul

Andorra/Andorre

Chief Participant: Mme Carme PONS FAUS
Co-ordonnatrice du Centre de formation et
d'apprentissage, Ministère de l'Education, Jeunesse
et des Sports

Argentina/Argentine

Chief Participant: Mr. Daniel HERNANDEZ
Secretary of Technological Education, Ministry of
Culture and Education

Mr. Fernando HIGA
Counsellor, Political Affairs, Embassy of Argentina
in Seoul

Armenia/Arménie

Chief Participant: Mr. Levon MKRTCHIAN
Minister of Education and Science, Ministry of
Education and Science

Mr. Vostanik MARUKHYAN
Vice-Minister of Education and Science, Ministry
of Education and Science

Mr. Nerses GEVORGYAN
Chief of Department of International Relations,
Ministry of Education and Science

Mr. Aram MKRTCHIAN
Chairperson, Standing Committee on Science,
Education, Culture and Youth of the National
Assembly

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Chief Participant: Mr. Roderick MANNS
Assistant Secretary, Vocational Education and
Training Reform Branch, Department of Education,
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Mr. Philip CLARKE
Director, National Policy, Australian National
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Ms. Pamela CHRISTIE
Director of Industry Programs, New South Wales
Department of Education and Training

Mr. Kenneth WILTSHIRE
Chairperson, Australian National Commission for
UNESCO

Mr. Christopher ROBINSON
Managing Director, National Centre for Vocational
Education Research

Mr. John SWETE KELLY
Managing Director, Moreton Institute of TAFE

Mr. Noel BENJAMIN
Counsellor of Education and Training, Australian
Embassy in Seoul

**UNEVOC Centres in Australia/
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Ms. Di BOOKER
Executive Manager International
Adelaide Institute of TAFE

Dr. Adrian HAAS
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UNEVOC Centre, RMIT University

Austria/Autriche

Chief Participant: Ms. Eleonora SCHMID
Head of Department, General Directorate of
Technical and Vocational Education, Ministry of
Education

Dr. Wolfgang LENTSCH
Director General, Ministry for Economic Affairs

Mr. Werner LENZ
University Professor, Institute for Pedagogical
Sciences and Adult Education

Mr. Georg PISKATY
Director, Austrian Employers Association

Ms. Inge KAIZAR MAG
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Bahrain/Bahreïn

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Mu-keun LEE

2. Director-General

Seong-woo HAN

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Kwi Bae KIM

Ha-Ok KIM

Jong-Jin SONG

Venue Management:

Ji-Sun CHUNG
Sun Kyung LEE
Su Kyung LEE
Hyun Jung LEE
Hae Young KIM

Registration:

Ji-hee CHOI

International NGO Forum:

Sang-Jin KIM
Mi-A SHIN

Functional Room:

Hong-Chan JEON
Jeong-Ho KO

4. Public Relations Team (Director: Whan-Sik KIM)

Tour & Transportation:

Juwon YOON

Study Visit Programme:

Ji-Won NOH

Press & Publicity:

Eun-Sang CHO
Eun-A KIM

5. Administration Team (Director: Jong-Baak YOON)

Airport Reception:

Seung-Ho LIM
Hyung-Chul JEONG
Hae-Joo JEONG
Mee-Souk KIM
Chan-Woo JEONG

Administration:

Dong-Jin CHOI

6. Protocol Team (Director: Mi-Sug JIN)

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Hyun-Soo KIM

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Ji-Yeon LEE

Youn-Hee PARK

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9. Kyungyon Exhibition Corp. (President: Young-Soo KIM)

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