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SPEECH BY DR TOH CHIN CHYE, MINISTER FOR HEALTH AT THE  
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Development of technology involves not only investment of capital but also transfer of knowledge from the developed countries to the Less Developed Countries (LDCs). Information on pure scientific research is readily available in innumerable journals but technological information is not. It is covered by patents and has to be bought. The World Intellectual Property Organisation is located in Geneva. For instance, in a turnkey project on the building of an electric power station, 40 per cent of costs go to consultancy fees and 60 per cent on the purchase of equipment and local labour costs. This is technology transfer that interests the LDCs but the price is not cheap.

Development is synonymous with modernisation. During the Meiji Dynasty over 100 years ago, Japan sent thousands of students to the West to study science and technology. It laid the foundation for the modernisation of Japan which is now the world's third largest industrial nation. Development must be related to the economic and social needs of a country. It is pointless sending students overseas to study high energy physics if their countries are in no position to provide them with the same physical facilities on their return. This must lead to a brain drain.

There must therefore be a judicious choice of priorities in areas of studies when students are sent overseas so that they can fulfil the developmental needs of their countries whether these be in industry, agriculture, urbanisation, transportation, health or even population control. Capital must be invested into development project but LDCs with large populations are unable to do so because population consumes capital. Secondly, it is a fallacy that populations of several millions in LDCs provide a domestic market for import substitution industries.

If large populations do not have the purchasing power, industries for the domestic market will be unable to take off. Consumption of capital savings and lack of purchasing power are some of the reasons why there are countries which are unable to develop. For these reasons, population control has become an important aspect in development.

It is a serious error for scientists to make believe that high level science is the key to development. The developmental process depends on different levels of skills from engineers, technicians to craftsmen. Education for development must take these facts into cognisance.

LDCs have their scientific elite versed in laboratory research, but the elite are more interested in their specialized fields of research than understanding how they can contribute to the development of their countries. To many purists and academics, the management of science and scientists is abhorrent but it is countries with a sense of good management of science and their intellectual resources that have become developed. Scientists in LDCs will make little impact on development until they recognize that they must work in tandem with the decision makers in their governments. It is in recognition of this necessity that a Regional Institute of Higher Education and Development was established in Singapore with the help of UNESCO and the International Association of Universities. The members on the Board of the Institute are representatives from the governments of Indonesia, Malaysia, Singapore, Thailand (Cambodia, Vietnam and Laos). The purpose of the Institute is to bring together a meeting of minds of civil servants in the member governments and academics from their universities, so that academics from different disciplines can understand the political realities which face the decision makers and civil servants will be able to tap academics for expertise.

In to-day's modern world if economics is interdependent so also is science and technology. Rubber was never indigenous in South East Asia. It was a British botanist by the name of Ridley who introduced rubber into the Malay Peninsula a hundred years ago. Since then scientific research has yielded new clones which produce higher yields of latex until to-day Malaysia and Indonesia are responsible for two-thirds of the world's consumption. The planting of rubber trees, the manufacture of rubber into a multitude of products, transportation services and banking services required to export rubber have created employment for thousands of people. This is an excellent example of how appropriate science and technology can contribute to development with a widespread multiplier effect.