

G8-UNESCO World Forum on Education, Research and Innovation: New Partnership
for Sustainable Development
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INNOVATION AND SOCIETY

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Rapporteur's Report
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There were five excellent presentations at this session which covered some fundamental issues related to the role of industry, government and academia in promoting innovation. This brief report of the session does not do justice to the many issues raised, examples given and suggestions made by five outstanding speakers.

The facts and figures quoted confirmed that although access to technology, especially ICT, had globally increased over the past decades, the inequalities in access between the developed and developing countries had also increased. For example, only one sixth of the world's population, mostly in developed countries, have computers today.

Technology has now become the new wave of globalization. It can, by facilitating access to knowledge, promote economic growth, help to alleviate poverty and reduce the digital divide. By embracing technology, developing countries should strive to become knowledge economies as experience has shown that knowledge economies are resilient to global challenges. However, building a knowledge economy requires competing resources such as providing education at all levels and building information technology infrastructure. It also requires political will and leadership and social consensus, and new approaches and partnerships: between the public and private sector, the producers and the consumers and the importers and exporters.

The ICT industry can play an important role in facilitating access to technology, promoting education and encouraging job creation. Microsoft, for example, has been doing this and it recently announced a series of initiatives which will provide online training and certification, create additional centres where IT hardware and software can be accessed, encourage competition among students and make software available at very low prices.

Fundamental research in pure and applied sciences is a driving force for innovation and it encourages curiosity. Those countries which excel in innovation support excellence in fundamental research and encourage its applications to industry. Fundamental research, however, requires not only a robust ICT infrastructure but, more importantly, large numbers of highly skilled scientists and engineers. No country can excel in fundamental research on its own – it requires collaboration between universities and research centres in the north and in the south, and in almost all cases fundamental research is undertaken by teams of international scientists and engineers. ICT can make it possible for such north-south collaboration to take place.

The G8 countries and UNESCO should promote and support initiatives to connect, through ICT, universities and research centres in the north to those in the south.

The converging, emerging technologies comprising nanotechnology, biotechnology, information technology and cognitive sciences (NBIC), which are advancing very rapidly, have the potential for making remarkable long-term advances in improving human development and the quality and even the duration of human life. However, research in emerging technologies carry risks and they raise a number of ethical, legal and moral issues which need to be addressed upfront. It is therefore desirable to have a proper governance structure and a regulatory framework for NBIC. The development of the emerging technologies also requires heavy funding which raises the issue as to whether it is appropriate to invest in such technologies now when the resources could be used for much-needed developmental research, yielding immediate benefits to society, especially in developing countries. It is however recognised that the benefits of the emerging technologies will accrue to mankind globally, not just to people in developed countries, and through collaboration both scientists in the north and south can participate in promoting these technologies. The complexity of emerging technologies often raises doubts and fears among the public. There is a need to have a good system of communication among all the stakeholders so as to popularize these technologies.

For research and innovation to get anchored in society, governments must ensure that they are promoted at all levels of education, from primary to university. Governments can provide leadership by example by reforming and using innovative approaches in public administration. Public administration must change its approach: it should use a bottom-up rather than a top-down approach; it should become more familiar with technology and promote its use; it should re-organize its activities, be more transparent in all its dealings and improve the delivery of its services. Such reforming changes require the provision of education and training to public service workers. Italy has created a special Ministry for Public Administration, Reform and Innovation and this could be emulated in other countries.
