

ACHIEVING THE MILLENNIUM DEVELOPMENT GOALS:
A CHALLENGE FOR GLOBAL HIGHER EDUCATION

SESSION II: *From Aid to Global Sharing of Knowledge: Research Excellence and Commitment to Development*, by William Saint¹

“The digital gap cannot be quickly overcome, but knowledge transfer and its fair distribution is a basic condition for world peace.”

James Wolfensohn
President, World Bank

As human beings, we face the challenge of adjusting to life in the 21st century that is no longer structured solely around our communities or towns. Today we are challenged to think and act as citizens of the global village. This global village of 6 billion people has to confront the problems of the 1.2 billion members – one out of five – who live on less than US\$ 1 per day. Such inequity breeds insecurity and instability. But the challenge of finding constructive ways to live in community will become more difficult over the next 25 years as 2 billion more people are born into our global village. Fully 95 percent of these will join the ranks of poor people in the developing countries. The challenge of how to alleviate the crushing pressures of poverty on our global civilization – on its economies, political systems, environment, and capacity for meaningful collaboration – is likely to be the defining feature of this century.

Higher education plays an important conditioning role in our efforts to loosen the grip of poverty on our world. It does this in four ways. First, tertiary education alleviates poverty through its direct contributions to economic growth as it influences a nation’s productivity and international competitiveness. It does this by training a qualified and adaptable labor force, by assisting the nation to access and generate new knowledge, and by adapting global knowledge for local use. In this way, it helps to determine living standards.

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Second, tertiary education reduces poverty through redistribution and empowerment. Specifically, it generates empowerment through the building of social capital and aids redistribution by expanding opportunities for employability, income, and social mobility.

Third, it strengthens the entire education sector. Tertiary institutions train (and re-train) teachers, school principals and system managers. Their staff play a major role in curriculum development and evaluation for primary and secondary education. Their researchers analyze education performance, identify problems, and provide policy advice.

Fourth, tertiary education contributes importantly towards the attainment of the Millennium Development Goals. Its research and technology adaptation engender improved food supply and rural incomes. Tertiary institutions train the professionals – doctors, nurses, teachers and administrators – who will oversee and implement MDG activities. In addition, they foster relevant capacities in research, applied technology and community service that are essential for improving welfare levels for poor families, particularly vulnerable women and children, in those countries targeted by the Millennium Development Goals.

Because of their special role in promoting innovation and boosting productivity at the international as well as at the national level, I believe that institutions of higher learning in this country, and in all industrialized countries, have a responsibility to engage vigorously with their counterparts in the developing world. Collectively, you possess a unique capacity to shape the intellectual, moral, technological, and economic landscape here in Germany. From my position at the World Bank, I often have the opportunity to see how the institutional policies you espouse and the activities you undertake also have a similar impact beyond your borders, containing the potential to improve the lives of our less advantaged neighbors in the global community. The qualities and capabilities that characterize higher education systems in Europe, North America, and elsewhere confer upon them a special obligation to reach out and participate more fully to share knowledge, challenge theories, improve institutional performance, and make both students and academic staff more active as world citizens. Thanks to modern technology, this sort of engagement no longer requires monumental efforts or heroic amounts of

financing. It requires something more vital and personal: a compassionate institutional vision and a commitment to implement it.

The theme of this session is “From Aid to Global Sharing of Knowledge.” It implies, correctly I believe, that financial assistance alone is not sufficient to drive development. Knowledge, too, plays a vital role. As noted earlier, institutions of higher learning are the principal mechanisms that developing societies use in the 21st century to generate new knowledge or, more often, to access existing knowledge from anywhere on the planet, evaluate its relevance to local needs and opportunities, adapt it to local circumstances if necessary, and apply it in productivity-enhancing economic activities or in welfare-enhancing social development.

At the global level, however, universities are in danger of losing their historical monopoly over the production, guardianship and transmission of knowledge. Increasingly, all of us find ourselves living in the “information age,” participating in the “knowledge economy,” and struggling to confront the challenges of functioning in an “internet society.” In this context, other institutions, including libraries, publishing houses, entertainment companies, internet businesses, and non-governmental organizations, are stepping forward, in some cases, to challenge higher education’s dominance in the sphere of knowledge management. In other cases, these institutions seek to complement and enhance the traditional mission of universities.

Among this latter group of knowledge collaborators one increasingly finds the principal development assistance agencies as well as non-governmental organizations. In fact, development cooperation has always embraced knowledge-sharing as a major activity, i.e., through support for conferences, workshops, study tours, staff exchanges, and institutional partnerships. Recently, however, economic analysis has come to emphasize knowledge as the central determinant of economic performance in all regions of the world. This shift was captured and analyzed in the *World Development Report 1998-1999: Knowledge for Development* (World Bank, 1999).

Subsequently, we have witnessed much more explicit attention to knowledge management among development partners. The German Technical Agency (GTZ) is

establishing a knowledge management network, as is the Japan International Cooperation Agency (JICA). The British Department for International Development (DfID) has launched a knowledge sharing project. The European Commission, the Swiss Agency for Development and Cooperation, and the Canadian International Development Agency (CIDA) have taken similar steps (King and McGrath, 2003).

The World Bank counts itself among the development partners that have given explicit attention to knowledge management. In 1996, World Bank President James Wolfensohn heralded this shift when he challenged Bank staff to become a “knowledge Bank.” Since then, knowledge brokering has become an expanding form of development assistance. Knowledge sharing has received explicit attention at the World Bank, overturning its former secretive policies on information confidentiality and creating a new transparency and much greater access to the Bank’s substantial informational resources. The Bank’s extensively developed website (www.worldbank.org) is just a single example of this transformation.

To give you some sense of what the World Bank has done in the effort to become a “knowledge bank,” let me provide you with several examples.

In 1999 the World Bank incubated the *Development Gateway*, which became an independent entity in 2001. The *Development Gateway* is a source of innovation and learning on how to apply knowledge and information for development. Its services make available content on a wide variety of issues, support development collaboration by aggregating and standardizing information, and sponsor the creation of local development “portals” by affiliated non-governmental organizations. It includes a knowledge exchange on 31 development topics, a database of development projects, an electronic marketplace for development business opportunities, country gateways comprised of 43 country level portals operated by independent local organizations, and a technology platform that offers open source software to manage and disseminate information. The *Gateway* currently has 16,000 registered users.

A second initiative is the *Global Development Learning Network* (GDLN), which was launched in 1998. It uses distance learning technologies and methods to facilitate

interactive, cost-effective learning and knowledge-sharing for sustainable development and poverty reduction. GDLN is a worldwide partnership of 60 distance learning centers and other public, private, and non-governmental organizations committed to development learning and development dialogue. Coordinated by a technical team within the World Bank Institute, GDLN enables development partners to hold training events that reach participants around the world at very low costs, involving an estimated 30,000 learners per year.

A third example is *World Links for Development* (WorLD). It began in 1997 as a philanthropic pilot initiative in response to widespread requests from developing countries to assist them in preparing their youth to enter an information age and participate effectively in the global economy of the next millennium. Reaching over 200,000 teachers and students in 22 developing countries, WorLD has developed and delivered teacher training and leadership programs at the school level. It has also sponsored 400 school to school electronic networks between countries in the North and South and provided internet access to students from developing countries.

A fourth illustration is Africa-specific. Entitled the “Indigenous Knowledge for Development Program,” it strives to identify development issues that can be effectively dealt with through the application of indigenous knowledge and practices. The program is supported by a website (www.worldbank.org/afr/ik), an indigenous knowledge database that provides quick access to a collection of traditional practices in various areas of development, and by a periodic newsletter that highlights the potential applications of indigenous knowledge to development problems.

A final example is also Africa-specific. It is the *African Virtual University* (AVU), which began as a World Bank pilot in 1997 and has operated since 2002 as an independent entity based in Nairobi, Kenya. It employs modern telecommunications technology to provide world-class quality education and training programs to students and professionals in Africa through 34 Learning Centers in 19 African countries. Operating in both French and English, the African Virtual University works in collaboration with national African Universities to identify the most essential programs needed for Africa’s development. It

then establishes partnerships with the best universities in the world to develop course content and delivery. Courses are supported by a digital library containing journals, books, and online resources. In this way, the AVU seeks to help African universities offer courses that are critical to national development, but which they otherwise may not be able to provide as the result of staff shortages, library limitations, and the rapidly evolving pace of knowledge in these disciplinary areas.

Even more significant is the fact that the World Bank has systematically complemented its traditional investment operations with knowledge-based non-lending services. These services draw upon the Bank's comparative advantage as global repository of development information to provide its partners and clients with lessons learned, ideas of good practice, and relevant experience from elsewhere on the globe. For example, in Eritrea the World Bank facilitated the country's effort to forge into next-generation Internet-based networks by helping Eritreans to visit cutting-edge ICT applications from Andhra Pradesh state in India, to engage leading Chinese institutions and professionals on network development using Internet protocol, to pursue a knowledge-intensive dialogue with these groups through weekly video conferences, and to learn the latest techniques in California's "Silicon Valley."

Since the release of its report on *Knowledge for Development* in 1998, the World Bank has increasingly recognized the development contributions of higher education and has invested in its development. Specifically, between 1994 and 2004, the World Bank lending for higher education averaged US\$ 343 million per year. One-third of this amount is requested by governments from Latin America. East Asia is close behind with a 30 percent share. Sub-Saharan Africa receives 10 percent of this total. Currently, the World Bank's education portfolio has over 40 active loan projects that specifically support tertiary education in developing countries, and an additional 45 education sector projects that contain tertiary education components.

The Bank's assistance to higher education takes many forms, depending upon the specific circumstances and needs of each country. Nevertheless, it is possible to highlight four characteristics that are often associated with the Bank's higher education projects. The

first is the use of “innovation funds” as a main mechanism for disbursement of funds. These funds are accessed by universities through the competitive submission of funding proposals that are then evaluated through a local peer review process. Subsequent awards provide direct support to academic staff members desiring to promote improvements in teaching, learning and management while respecting the autonomy of the institutions to define and manage their own change processes.

A second characteristic is a strong concern for improvements in educational quality. To this end, Bank support seeks to boost the performance of classroom teaching and student learning. In many countries, capacity building assistance for internal quality control mechanisms and external quality assurance agencies is a complementary feature.

Third, World Bank investments in higher education are giving more conscious attention to the development of graduate education and research programs. Here the goal is to produce academic staff to support the rapid expansion of enrollments underway in numerous systems while also strengthening local capacities to participate in the global knowledge economy. In doing this, priority is often given to academic programs that are directly linked to human resource needs in the country’s areas of greatest economic potential.

One example of this approach is the Bank’s *Millennium Science Initiative* (MSI). This funding window addresses the need for developing countries to improve their scientific and technological capacities in order to stimulate innovations that lead to productivity gains, increased competitiveness, and economic growth. MSI projects usually seek to foster research excellence while linking researchers to partners in the international scientific community and the private sector. To date, the *Millennium Science Initiative* has been limited to half a dozen countries in Latin America, but exploratory discussions are currently underway on the African continent in Tanzania and Uganda.

A fourth characteristic of the Bank’s higher education investments may be of particular interest to this conference audience. This is a strong emphasis on partnerships as a means of achieving many project goals. For example, university partnerships with the private sector help ensure curriculum relevance and reduce the possibility of graduate

unemployment. South-south partnerships enable the sharing of lessons learned under similar conditions. North-south partnerships provide access to the forefront of knowledge and cutting-edge technologies.

But let us not allow this heady discussion of knowledge sharing accomplishments to dull our critical faculties. The question of whose knowledge gets shared must be borne consciously in mind (King and McGrath, 2003). Within development assistance agencies (and the World Bank is no exception), tensions exist between headquarters and field offices,² between some specialists and others (e.g., economists and educators), and between internationally and locally recruited staff. Whose knowledge gets shared within these agencies also depends on what the dominant institutional culture sees as constituting important knowledge. Institutions located in the industrialized societies, particularly in Western Europe and North America, tend to value quantitative, scientific and economic information over other types – a bias that is not always shared in the developing nations.

The context in which knowledge sharing takes place is also worth considering. This includes globalization in all of its forms, the internationalization of trade in educational services, the aggressive marketing of Northern higher education, the severe constraints on the conduct of research in many developing countries, and the steady decline in overall development assistance to the South (King and McGrath, 2003). In light of these challenges, which are unique to the 21st century, it is perhaps not surprising that these agencies have preferred to address their own internal needs for knowledge sharing instead of those of their partners and clients. At present, the organization of and access to internal institutional knowledge seem to have received far greater attention than mutual knowledge construction among collaborating partners. This would imply that the driving force behind knowledge sharing may be competition instead of collaboration (Gibbons, 1998). If this is the case, then knowledge sharing will lead neither to development nor to partnership.

² Two-thirds of the Bank's Country Directors are now based in the countries they serve.

Higher education is often fond of portraying itself as a global academic brotherhood joined by common traditions, values, and pursuits. This can be, I am afraid, a rather geocentric viewpoint. In many developing nations, the “poor cousins” in this worldwide family sit at the margins of the international intellectual community. More than 75 percent of the world’s population live in developing countries, yet they account for less than 5 percent of the inputs for research and development – and an even smaller share of the outputs. R&D spending by the 29 OECD countries in 1998 was greater than the total economic output of the world’s 61 poorest countries.³ The most highly trained and talented citizens of the developing world routinely migrate to seek opportunities in scientifically advanced settings. A fair number of these men and women end up at universities such as yours, where the global research agenda is naturally influenced by local industrial and commercial priorities. At the same time, critical remedies to catastrophic problems in developing countries – whether malaria or AIDS – are (or will likely be) privately owned and unaffordable to the citizens of those countries.

In any given year, a number of the world’s poorer countries will file no new patents, produce no scientific publications, and train no new qualified researchers. Many have no firms capable of improving productivity through the application of existing technology, no universities that can support knowledge creation and advanced professional training, and no resources from their government to undertake research of public importance. In contrast, many of you from the German higher education community must grapple with issues related to the ownership of scientific breakthroughs on your campuses.

Although intellectual property protection can provide an essential stimulus to commercialization of research conducted at your institutions, it also carries the risk of limiting access to populations that would most benefit from its outcomes. Universities in Germany are in a strategic position to balance the tension found in intellectual property laws and recent WTO initiatives. You could help the world to develop thoughtful and socially responsible policies and practices regarding intellectual property that might abate

³ US\$ 500 billion versus US\$ 464 billion for the low income countries, excluding China and India (World Bank, 2000).

and even resolve some of the thorniest problems of poverty and disadvantage around the world.

Given the rising premium placed on knowledge of all kinds, many national governments are striving to establish systems of scientific and technological innovation that can invigorate their economies and attend to their social needs. Higher education institutions are natural starting points and hosts for such initiatives. The process of cultivating these capacities is clearly long-term and full of uncertainty – especially in developing countries – as scarce resources are always under pressure from competing needs.

However, there are reasons for optimism. First, new communication technologies facilitate access to knowledge and reduce the disadvantages of physical distance. In this, they hold the capacity to overcome these longstanding deterrents to research collaboration. Second, much of the international academic community is by nature open to international cooperation, as its members recognize that the advancement of science depends on a culture of freely shared knowledge. Within many parts of the world's research community, tremendous good will exists to strengthen research capacities, recognizing the progress anywhere will eventually generate benefits everywhere. In opposition to such good will, I believe that we are currently witnessing an erosion of this openness as commercially applicable knowledge becomes more closed and researchers become less willing to cooperate freely for fear of losing exclusive and lucrative rights to discoveries. Fortunately, much of what countries need to accomplish in order to increase their research capacities does not require winning prizes for research or cashing in on discoveries. It requires the more mundane yet essential tasks of developing effective people, policies and institutions.

All of you here can help make your institutions important players in the network of knowledge sharing that can improve the lives of all, including through contributions towards the Millennium Development Goals. You can do this by promoting policies to help your academic staff and students to reach out and engage others, to connect with their colleagues around the world, and to share information or experience.

The developing world is generally not well positioned to make good use of much of the scientific and technological knowledge produced worldwide. But it is precisely this knowledge that holds great promise for reducing poverty and improving human welfare. The scope and spread of such benefits will depend on the development of local intellectual capacities as well as the resources devoted to higher education and research in both the developing and industrial worlds. How effectively knowledge and technologies – especially those of global humanitarian significance – will be transferred and used is as yet uncertain. The fullest contribution of knowledge to a better human existence will ultimately depend on how well policies (and political bodies) support, stimulate and guide research and higher education towards truly beneficial uses. You and your institutions have the capability to play a major role in this process. To this end, I would challenge you to preserve, nourish and advance the values, culture and practice of a global academic community – a community that is above politics, beyond commercialism, and true to the most noble aspirations of humankind.

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