

HIGHER EDUCATION AND GLOBAL DEVELOPMENT

POLICY ROUNDTABLE #1

The Look of Development Cooperation Ten Years Out: What New Roles for the State, Higher Education, Business and Industry, and the Community?

December 12, 1995

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Washington, DC

Association Liaison Office for University Cooperation in Development

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EXECUTIVE SUMMARY

The first in a series of Policy Roundtables on Higher Education and Global Development was convened by the Association Liaison Office for University Cooperation in Development (ALO) with the U.S. Agency for International Development (USAID) on December 12, 1995. The Roundtables are to focus on emerging cross-sectoral issues and the changing circumstances of development cooperation as these may involve higher education. They aim to bring higher education expertise to bear on the identification of key and emerging development problems, strategic approaches for their amelioration, and effective models of partnership for development cooperation.

The first Roundtable addressed "The Look of Development Cooperation Ten Years Out: What New Roles for the State, Higher Education, Business and Industry, and the Community?" The Roundtable sought to identify (i) emerging risks and trends; (ii) opportunities to address these; and (iii) new ways to collaborate.

A number of global issues will create demand for U.S. contributions in science and technology during the next few decades. First, sustainable growth in agricultural production is not assured and agricultural research is inadequate. Second, the establishment of an adequate global health research and training

system has hardly begun. Current health research is still directed to problems of developed countries, and resurgent diseases and new diseases may foster a global health crisis that will affect everyone. Third, the combination of industrial and agricultural production is contributing to negative environmental changes in agricultural production, public health, and quality of life. Fourth, the international economic and political environment of the 21st century will be vastly different than the bi-polar order of the 20th century. The prospect is for a "new world disorder" which will require new institutional arrangements in the areas of economic organization, governance, and social and cultural spheres. The development community, while providing shorter-term humanitarian relief and response to selected crises, must invest resources in solutions to longer-term -- and potentially more devastating -- problems.

Participants affirmed the essential role of the higher education community in --

- a. identifying and analyzing global risks and trends and factors affecting economic, social, and human development,
- b. applying science, technology, and social analysis to the challenges of feeding, educating, and maintaining the health and well-being of growing populations,
- c. liaising with U.S. business and industry in

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research, development, and training to help grow economies,

- d. building the advanced levels of human capacity necessary to a society's scientific and technological, political, legal, and other social systems,
- e. generating collaborative research and knowledge networks to link planners and researchers in developing and newly independent countries to information sources about development, and
- f. bringing higher education resources, and the awareness of global development issues, to local communities.

The following priorities were identified for development cooperation between USAID and the higher education community.

1. Forge Multidisciplinary and Interdisciplinary Teams to define and seek to solve complex development problems. Confronting global risks -- concerning environmental, health, and food security problems and how they interrelate -- and establishing means for economic organization, governance, and social justice, cannot be approached within single disciplines or single sectors. Future progress requires work not only as *individuals* in a multidisciplinary manner, but also in interdisciplinary *teams*.

The process of focusing multiple disciplines

around problem definition and solution should permeate universities and government agencies and be used to structure action. The example from the International Rice Research Institute is illustrative. The objective, mandated by the director, was to tackle the problem of raising rice yields, rather than "doing good science" in a variety of disciplines. Institutional decisions built loyalty to broader, action-oriented goals and promoted greater cooperation across sectors, disciplines, and departments. The benefits, barriers, and structures to facilitate solving complex development problems deserve study in a roundtable.

2. Build and Sustain Advanced Human Capacity in-country or regionally to identify and address technological and other development problems. A systemic approach to the preparation and use of human resources is vital for cooperating countries. Entrepreneurs, scientists and technicians, administrators and academics, and other professionals will become increasingly important catalysts for development.

A key factor in Asian countries which have been successful in development is commitment to building local human capacity and to identifying and finding solutions to technical and scientific problems. Serious consideration should be given to new ways of engaging higher education and business in work with governments to build commitment to enhancing in-country capacity for scientific problem-solving.

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Building advanced capacity will be aided by changes in the availability of information technology. Worldwide collaboration among scientists, and the sharing of applications for development, will be increasingly possible through the Internet and as a result of higher education partnerships and professional networks. Opportunities for greater international collaboration in those areas where the U.S. has comparative strength deserve more attention: food production and distribution; research and development technology and application; higher education and industry partnership; and higher education as a model of a differentiated system and as a source of graduate expertise and public service.

3. Use Existing Higher Education/Business and Industry/Local Government Partnerships. Many of the efforts toward global development occur outside the purview of USAID and this trend will increase. The growing diffuseness of development expertise and the decline of federal support for development assistance make it important to pursue national interests in development through higher education/private sector/community partnerships. Further thought should be given to ways that USAID might tap into development cooperation efforts which it has not planned and initiated.

New forms of alliances for economic development and international education exist among community and state colleges and

universities with business and industry and local government. Many of these alliances could and do advance national priorities in development assistance. Creative thought is called for on ways to build on areas of mutual interest.

Research-intensive universities have and will continue to work in international development cooperation. The range of interests is wide and many of these efforts involve partnerships with universities abroad and the private sector. The case of one university, which has some 50 cooperation agreements with institutions in countries which USAID assists, is illustrative. It is important to examine whether additional development benefits could result from the overlap of USAID interests with those which universities and their partners are pursuing.

The higher education community has a special opportunity to inform the public about their "enlightened self-interest" in development cooperation. This process will be aided as the public becomes familiar with the benefits that accrue locally from international efforts of local colleges and universities, business and industry.

ABOUT THE ROUNDTABLE

This describes the first in a series of Policy Roundtables on Higher Education and Global Development which the Association Liaison Office for University Cooperation in Development (ALO) and the U.S. Agency for International Development (USAID) plan to convene. The Roundtables are to focus on emerging cross-sectoral issues and the changing circumstances of development cooperation as these may involve higher education. The purposes of the Policy Roundtables are to:

- o Bring higher education expertise to bear on the identification of key and emerging development problems, strategic approaches for their amelioration, and effective models of partnership for development,
- o Predict and describe the future of development cooperation to advance human, economic, and democratic development, and
- o Promote the constructive engagement of thinkers from the higher education community and USAID on topics of common concern.

The first roundtable addressed "The Look of Development Cooperation Ten Years Out: What New Roles for the State, Higher Education, Business and Industry, and the Community?" Fourteen persons, representing a range of higher education institutions, disciplines, and development experience, joined with fourteen USAID officials for the all-day session on December 12, 1995, at the National Center for Higher Education at One Dupont Circle in Washington, DC.

The agenda of the first roundtable was to:

- o Identify future priorities and opportunities for development cooperation involving higher education,
- o Consider new models of partnership and alliances which are emerging for development cooperation, and
- o Identify critical issues in supporting U.S. interests in global development.

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A recurring theme at the Roundtable was the need for all levels of American education to recognize the importance of educational exchange and cooperation as an essential tool of American public policy and diplomacy. On this score, it was recognized that the leading role traditionally played by preeminent universities and land-grant institutions has to be further broadened and supported by efforts at the regional comprehensive campus, community college, and even K-12 educational systems. One of the significant outcomes of the meeting was the affirmation of the essential role of the higher education community in --

- a. the identification and analysis of global risks and trends and factors affecting economic, social, and human development,
- b. application of science, technology, and social analysis to the challenges of feeding, educating, and maintaining the health and well-being of growing populations,
- c. liaison with U.S. business and industry in research, development, and training to help grow economies,
- d. building the advanced levels of human capacity necessary to a society's scientific and technological, political, legal, and other social systems,
- e. generating collaborative research and knowledge networks to link planners and researchers in developing and newly independent countries to information sources about development, and
- f. outreach and service to bring higher education resources, and the awareness of global development issues, to local communities.

The report seeks to provide a sense of the Roundtable without attributing specific comments to the persons who made them. The reader will find statements in the report which deserve greater elaboration than was possible during the Roundtable. The report includes such observations to reflect the range and spirit of the exchange as it occurred.

The ALO and USAID encourage the use of this report for further debate and discussion about worthwhile ways to join the resources and expertise of the higher education community in support of the nation's, indeed the world's, interests in global development.

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INTRODUCTION

An underlying theme of the policy roundtable series is the future relationship between the higher education community and USAID -- "beleaguered allies" with a shared belief in development assistance. The challenge is to look ahead into the future of development cooperation and identify common interests, means to pursue this convergence of interest, and strategies for conveying the importance of development cooperation to the American public.

The Policy Roundtable series recognizes the strength of the relationship that has existed between the American higher education community and USAID. In today's conservative fiscal climate, domestic policy pressures create new reasons for higher education and USAID to cooperate. Both face challenges to respond effectively to the public's questions about the role of development cooperation and assistance.

What are the issues that the country cannot afford to ignore, even though resources are constrained? What will be the emerging global trends and needs in development assistance over the next three decades?

What opportunities exist for cross-institutional linkages and networks to better tap resources and expertise? How can collaborative partnerships with USAID and higher education, business, and community groups be fostered and simplified?

We face the proliferation of some two dozen "complex emergencies" around the world, as the end of the Cold War has loosened the control of superpowers over their clients. Donor assistance is sought to reduce ethnic and religious tensions, address the root sources of conflict, and reconcile competing interests for crisis management. Humanitarian relief and crisis response increasingly claim discretionary (non-earmarked) foreign assistance dollars. The tyranny of the immediate threatens to overwhelm longer-term investment in crisis *prevention*.

The aim of the Roundtable is threefold: to identify

- (i) emerging risks and trends;
- (ii) opportunities to address these; and
- (iii) new ways to collaborate.

GLOBAL DEVELOPMENT TRENDS: RISKS AND OPPORTUNITIES

The Roundtable focused first on the changing *content* of development cooperation as a result of global trends that will affect development prospects. These trends, highlighted below, will create increased demand for U.S. higher education's contributions in science and technology, and in advanced education and skills training, during the next decades. Challenges ahead are also expected to heighten the importance of international communications networks through which development planners, practitioners, and scientists can exchange knowledge and experience.

Agriculture, Environment and Health

As the world population continues to grow geometrically, pressure is being placed on land, water, energy and biological resources to provide adequate food and maintain the integrity of the ecosystem. Based on current rates of increase, the world population is projected to double from roughly 6 billion to more than 12 billion in about 50 years. As the world population grows, the food problem will become increasingly severe, with the numbers of malnourished reaching 3 billion.

The per capita availability of world grains,

which make up 60 - 80 percent of the world's food, has been declining for the past 15 years. Dependence on livestock is high. Half of the U.S. grain goes to feed livestock, and 37 percent of world grain feeds livestock.

The continued production of an adequate food supply depends on an ample supply of fertile land, fresh water, energy and the protection of biodiversity, as well as human resources and physical capital. Food source of fish is declining per capita worldwide, making us more and more dependent on the land for food, which supplies 99 percent of the world's food. Yet, the earth's tropical rain forests are being wiped out -- 80 percent by agriculture from deforestation and erosion. Most of the arable land in the world is in production, and wind erosion is enormous: African soil is found in Florida and South America, transported across the water, and Chinese soil is picked up in Hawaii. Water erosion is also important. It takes 500 years to replace one inch of lost soil with a minimum of six inches needed for crop production. *During the last 40 years, we have lost nearly thirty percent of the total arable land of the world, primarily due to erosion and salinization.*

Water is critical for all crops which require and transpire massive amounts of water during the growing season. About 87 percent of the world's fresh water is consumed or used by agriculture and is not recoverable. Yet, *worldwide water shortages are reflected in the per capita decline in irrigation used for*

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food production in all regions of the world during the past 20 years. Furthermore, 40 percent of the world's people live in regions that compete for water.

Worldwide per capita supplies of fossil energy show a significant decline. Nearly 80 percent of the world's fossil energy used each year is consumed by the developed countries to maintain their high standard of living. The intensive farming technologies of developed countries use massive amounts of fossil energy for fertilizers, pesticides, irrigation and machines as a substitute for human labor.

There are dozens of technologies to control these trends, but they are not being implemented as effectively as possible. To put deserts into production requires water and enormous energy to irrigate. For example, about 7 million liters of water are needed per hectare, or 750,000 gallons per acre -- and twice that much water is needed per growing season for irrigation to produce a crop, which is why we will have great difficulty to produce crops in the deserts of Africa.

Diseases related to water result in approximately four billion cases of water borne diseases and six million deaths in developing countries due to water per year. Approximately 2.5 million tons of pesticides are used per year to protect crops worldwide against insects, diseases, weeds, rodents, etc. A total of 56 percent of food production is lost, both pre-harvest and post-harvest, to

pests despite the use of pesticides and other nonchemical controls; and there are about 3 million poisonings and 200,000 deaths per year related to pesticides.

Technology can help, but cannot solve all the problems related to these global trends. There are limits of technology to fish production and forest production as water resources and arable land decrease. For example, improved agricultural technologies have not stopped the decline in food production; fish production continues to decline despite larger and faster fishing vessels; and no technology exists to augment rainfall or make up for depleted water in lakes and rivers (e.g., the Colorado river enters Mexico, but no longer empties into the Sea of Cortez).

Do these trends imply that research may be focused on the wrong issues, or that the research is too slow, despite the focus by USAID and higher education on improved crop production, integrated pest management, and other methods? We are falling behind on all fronts. Improved methods are not being implemented and used as effectively as they should be. The total complexity of the issues and problems involved needs to be better understood (along with issues of land tenure and use). The development community, while providing shorter-term humanitarian relief and response to selected crises, must invest resources in solutions to longer-term -- and potentially more devastating -- problems.

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Higher education can respond by examining the environmental resources available for food production; developing strategies that conserve natural resources; investing in science and technology; and educating students and the public about responsible use of resources, critical situations, and future trends. We have to demonstrate why we must be involved in international cooperation on these issues, educate people about them, and build a constituency for development cooperation on these problems.

The American people in general do not know why development is important. There is a natural partnership between government and higher education to explain to people the purpose of and returns to development assistance.

Though education is a necessary condition, it is not sufficient. There is also need to change people's behavior. The challenge is to forego short-term benefits for long-term gain. The stark images are far enough away, that people think a little more profit may be pursued before beginning to deal with these issues. The higher education community can play a vital role in political mobilization to convince the American people of the critical need to address these issues collectively.

Economic and Systemic Transitions

Three major factors will converge to define the role of higher education institutions in the 21st century: economic structures, political systems, and technological innovations.

Changes in these areas mean that the nature of human capital contributions to development are changing.

Key economic trends that will affect America's development strategy include greater competition and increased stratification in the labor market; the increasingly arbitrary line between goods and services (e.g., how much of computer software represents a physical good or embodies a service); the polarization of the economy into high-skill and low skill employment; the overlap between basic and applied research; and the multiple forms of business-government-higher education partnerships that continue to evolve.

The knowledge-based economy places a premium on applications, not just ideas. The gap between basic and applied research is narrowing. Basic research may result in products which can be sold a year later. Many marketable products from higher education research are not realized because faculty are not entrepreneurs. Universities and industry are forming partnerships to take better advantage of potential products, and there are lessons in this experience for global development efforts. Particularly as higher education is receiving less subsidy from the state, higher education and business have to form mutually supportive alliances, together with non-governmental organizations (NGOs).

Because of the polarization of skill levels

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within the economy, many people will face jobless futures. Technology both raises skill demand and lowers it. Technology accommodates illiteracy in the sense that a cashier does not have to know how to read if pictures substitute for words on the register keys. Technology subsidizes less education, which is very dangerous for society.

The U.S. has comparative advantages in food production; research and development technology; and higher education in terms of the features of the system and its resources.

The U.S. continues to be the greatest exporter of critical thinking skills, and U.S. higher education is largely perceived as a standard setter and a model.

Political issues include increased tensions between tribalism and national identification; regional responses to international diplomacy and trade; pressures to broaden the economic base of developing countries rather than simply rely on free trade; the fragility of democratic structures; human rights in political relations; and the goal of political socialization in the higher education experience.

Democracy is a consumer good, and requires considerable economic ability to pay for it: Investment in education at all levels is vital. Higher education needs to increase the preference for democracy, as well as increase the economic ability to pay for it. Human rights issues are also problematic: the danger

of fluctuating standards confuse and mislead people. Higher education has a political socialization role to play. We need to make the system work within colleges and universities as a model, and higher education should not abandon this role.

Training in the use of technology has not kept pace with the availability of the technology.

We need to apply technology to expand productivity -- to supplement rather than supplant. Technology should be a way of expanding teaching and learning, not replacing them. Student and teacher interaction will remain important, and should not be displaced by technology.

The capacity of higher education to respond to these development challenges is constrained by institutional bureaucracies, rigid personnel systems, and reduced funding. There is need for flexible arrangements to maximize resources. The concept of interdisciplinarity on campus may not be popular. Usually a Ph.D. student needs to be embedded structurally in a discipline. Multidisciplinary programs tend to work better in the university when the program looks like a department and has the respect of the faculty. There are parallels for USAID in the sense that projects are funded from particular sector accounts. USAID also has to contend with claims on resources for special interests. A substantive conclusion to be drawn is that the global risks and the opportunities which exist, for the U.S. and for

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the higher education community, must be approached multi-dimensionally.

The process of focusing disciplines around problem-definition and solution should permeate universities and government agencies and be used to structure action.

Until there is a common basis for understanding why we should be integrated around a program or problem area, there may not be much progress. An example from the International Rice Research Institute in the Philippines is illustrative. The objective of raising rice yields overcame loyalties to advancing science in specific disciplines. Loyalty to the broader goal can promote greater cooperation across sectors.

Universities, colleges, and community colleges are well positioned to reach out to the public. Much research and training in U.S. higher education relates to development. Academics need to appeal to the public's enlightened self-interest, not just the pursuit of knowledge.

We need to show the taxpayer the applications and the benefits to the state and to the community of working internationally by bringing the lessons back home; e.g., show that what we learned in India has lessons for Iowa.

Development professionals and the taxpayer may be altruistic, but there will not be a partnership if we ignore self-interest. We need to tell the story to the general public, rather than preach to each other. There are

very positive stories to tell: Why recruit international students? To help educate us. Why collaborate with agricultural, environmental, and health educators and researchers in Africa? For more efficient crop production and distribution at home, and to gather data needed to confront problems of global climate change and disease.

Political Issues: Complex Crises

The current times are perilous, not just from the standpoint of foreign aid, but for the role of the United States in the world. There are important lessons in reflecting on events of the 20th century. The post WWII Bretton Woods institutions (World Bank, IMF, GATT, etc.) were formed to respond to global threats. With the end of the Cold War in the current era, there are rising expectations for a new world order in which investment capital is redirected to problems of underdevelopment. Yet, the world was more proactive during the Cold War because of the political threat. There has been relative peace for 40 years during which time the superpowers could control their clients -- a reality born out of necessity to avoid confrontation. The end of the Cold War unraveled many nation states who no longer have the resources of their patrons.

Development challenges today are different and stem from the emergence of conflicts among ethnic, religious and nationalist groups. According to a recent government report, ten years ago there were three major

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crises ("complex emergencies") due to interethnic conflict. In 1989, there were ten; this year there are 29 emergencies -- a growing phenomenon. Donor programs have to accommodate ethnic and religious tensions and need to reconcile competing interests for crisis management and reconstruction. There is a lack of collaboration among those involved in reconstruction efforts. Resources need to be better focused to ameliorate cultural, ethnic or religious tension. Often, short-term efforts do not get at the structure of the problem and may even plant seeds for more conflict.

The international system has not adapted to the new kinds of response and cooperation that are needed. The system has too many specialized institutions, and the pursuit of resources drives institutions. Too many packaged programs are poised to capture relief dollars. The global community needs to review the mandates of institutions and identify which ones are irrelevant.

It is incumbent upon the higher education community to focus the debate regarding the "complex emergency" phenomenon. The tendency of government is to respond to crises in a reactive way without stepping back to look at the stakes. The conflict in Bosnia, for example, does not involve just Bosnia. Few people thought that the assassination of an Archduke in Sarajevo would lead to WWI -- we cannot take those chances for a global conflict. Conflicts cannot be contained within

national borders. The conflict in the great lakes region of Africa is already spilling over to Zaire and Tanzania. We are increasingly dependent on a stable and global economy as a primary concern relative to traditional humanitarian concerns. We may be on the verge of finding ourselves in the same ideological environment we were in the '20s and '30s with great potential for global catastrophe. For pragmatic reasons, we have no choice but to act and intervene. The U.S. needs to lead and still has the capacity to bring problem solving skills to bear.

Without crises, democracies are slow to act. It is hard to generate moral imperatives in diverse democracies. Unenlightened self interest is rampant in this country.

Universities can do the thinking about how to solve the crisis before it is a political issue. Altruism does have a role, but there are some issues to act on because there are responsibilities that come with power. Herein lies a big role for the higher education community: we fund universities to pursue these issues and try to be ahead of the curve in crisis analysis. Because of the uncertainty of funding, however, we are losing ground in addressing these critical issues.

USAID will have fewer resources in the future. Higher education institutions will bring their resources to bear on development problems if it is financially feasible and benefits accrue to students, the institution, and the community. *USAID can accomplish its*

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mission better with the higher education community than without it. Look for the overlap between the problems and higher education's capabilities.

Universities are in the development business, with or without USAID. International dimensions are now ingrained in colleges and universities. University and community college activities in development are so diverse that they have an ongoing momentum that is independent of USAID, but which USAID can buy into. Instead of viewing USAID as a patron, colleges and universities have a broader mission. USAID needs to look at where in the spectrum to step in. For example, Washington State University has 98 agreements with institutions in other countries, half of which are in USAID-assisted countries, but there has been no effort to examine mutual benefits that could be achieved toward USAID's objectives.

The higher education community has helped to prevent crises. There are examples of regions where violence has been reduced or stopped; yet, they are not well documented. More research examples are needed. A current example of a higher education/USAID partnership in crisis response comes out of Bosnia, and involves a collaborative grant to set up educational tools and documents, models, and evaluation instruments which can be "downloaded" from computers for efforts toward conflict resolution. This involves five faculties in a particular university and four

European universities in an advisory relationship.

The higher education community can bring creativity to the table in problem identification and solution. Americans fund universities to think about these issues before crises happen. If soil erosion is a problem, universities do not say, we will look into it if we get a grant. Universities try to be ahead of the curve in crisis analysis.

Technology and Development

Information technology is transforming societies and changing the way we work and learn. Computing trends include a decline in the cost of hardware, increasing miniaturization, and a rapid rate of technical improvement. Changes are underway in all types of media to match human preferences and to be more tailored and accessible. This revolution is creating a divide between the information-rich countries vs. the information-poor nations. The information-poverty of the developing world includes unreliable information, poor information support, weak data on performance, limited access in rural areas, and limited access to resources for professionals and researchers.

The cost of providing education is rising and consuming a larger proportion of families' resources at a time when more individuals want and need information. Students and government are more critical of educational

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institutions and more cost-conscious. There is greater use of technology by educational institutions as a tool, not just to do the job faster, but to do the job better. Specialists and classrooms at one location can be accessed interactively at another location. This makes possible a greater array of instruction and avoids the need to duplicate expensive resources.

Technology offers a way to make us better teachers, and take the results outside the classroom to widely scattered students and communities. Distance learning can bring esteemed instructors anywhere. Tulane University, for example, has just finished a CD Rom on Five Decades of Development. Instead of training 200 senior USAID managers a year in development studies, at one site, USAID can use this information to reach thousands of development specialists in diverse locations. Information technology can bring knowledge and skills to any location. It costs less (once investment costs are made), is up-to-date, requires less investment in time and travel, and less physical infrastructure. A natural partnership exists between universities and donors in the area of computer-assisted instruction.

Another area where the higher education community can contribute to development is through the "virtual university" -- the sharing of research, instructional models, and practical applications via computer and Internet. The best available information and analysis can travel anywhere; it is no longer the privilege

solely of institutions.

As higher education institutions start "digitizing" journals and publications, libraries can build their resources faster. Yet, the training to exploit the technology is lagging behind the technology. The technical capacity in developing countries needs to grow quickly. The availability of literature by computer will also help counter the "knowledge in waiting" problem in many developing countries, whereby journals, if they exist at all, may sit on library shelves until a professor needs them.

An important issue is the difficulty in getting library information on CD Rom. Since not all library material can be transferred, decisions are needed about which literature or information should be selected. Duplication is not costly, but the amount of literature that is of value is enormous. It might be desirable to transfer ten to twenty percent of what exists in a library to CD Rom, and that would be expensive. This will be an enormous challenge and we are only beginning to scratch the surface in developed countries.

There are related issues. First, there is the policy issue that information is power, and some governments are not comfortable with open knowledge and open markets. Second is the question of how to pay to generate the information. There has to be some return to the entities that are developing the information. Although initial production is expensive, once it is paid for, costs decrease.

SUCCESSFUL DEVELOPMENT COOPERATION -- LESSONS FROM THE PAST AND VISIONS FOR THE FUTURE

U.S. development assistance has been guided by six successive strategic visions since World War II. In chronological order, these visions called for: 1) the establishment of new post-war institutions to maintain a liberal political and economic order; 2) technical assistance for making the benefits of scientific advances and industrial progress available for the improvement and growth of underdeveloped areas (with universities having a central role in this effort); 3) the transfer of large financial resources by both bilateral and multilateral institutions, in the belief that a more prosperous world would be more secure; 4) "new directions" in foreign assistance tied to basic human rights and human needs; 5) the doctrine of closer linkages between economic and security assistance articulated in the Carlucci Commission Report (though USAID's Administrator McPherson embraced the "new direction" theme); and 6) sustainable development, a theme first advanced by the international environmental community and NGOs and taken up during the closing years of the Bush administration, and then embraced as a unifying foreign assistance theme by the Clinton administration.

A number of global issues will create demand for U.S. contributions in science and technology during the next few decades. First, sustainable growth in agricultural production is not assured and agricultural research is inadequate. Second, the establishment of an adequate global health research and training system has hardly begun. Current health research is still directed to problems of developed countries, and resurgent diseases and new diseases may foster a global health crisis that will affect everyone. Third, the combination of industrial and agricultural production is contributing to negative environmental changes in agricultural production, public health, and quality of life. Fourth, the international economic and political environment of the 21st century will be vastly different than the bi-polar order of the 20th century. The prospect is for a "new world disorder" which will require new institutional arrangements in the areas of economic organization, governance, and social and cultural spheres.

We are just beginning to confront the problems of the reconstruction of failed states. In addition, our technical capacity may be incapable of resolving the problems we are now creating. For example, the "green revolution" was built on fossil energy, which allowed us to get quick change. Yet, the increased use of fertilizer in developing countries eventually becomes toxic to the system. Now we are telling developing

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countries not to use certain techniques that we have used for short-term results because of the negative impacts. Some countries can dialogue with the World Bank -- yet, there are others without the capacity to borrow who need domestic research capacity. *Technology cannot be transferred without the domestic capacity to adapt it; and health delivery systems can't be designed without intellectual capacity and infrastructure.*

Ten years from now, we may see a different kind of assistance provided. We should look at lessons learned in countries with a successful development record. For example, two key ingredients are evident in the "Asian miracle" countries: 1) a commitment early on by governments to develop a capacity in-country or regionally to identify and address technological problems which they face; and 2) this commitment was not dependent upon donor intervention and resources. It was an internal and sacrificial decision to invest in education (especially basic education, and for girls), advanced training, and technical exchange. The notion of commitment should be transferable. Working with governments and national leaders to develop that commitment to the scientific endeavor to solve development problems in the country is a kind of assistance that we have not yet fully recognized or undertaken.

USAID's participant training is also a real success story. The long-term outcomes of training key leaders is an untold story. *We*

need to increase linkages with universities and research institutions abroad and develop visionary capacity, rather than simply feeding countries. Universities are the key institutions that can develop this capacity.

INTERNATIONALIZATION AND DEVELOPMENT COOPERATION

Participation of Community Colleges

The international work of community colleges has involved little USAID money.

Community college programs to internationalize the curriculum and in training and development have been mainly entrepreneurial in nature: seeking a contract and delivering a service. Community colleges have become international in outlook because they owe it to the students who will work in an international marketplace. Community colleges work collaboratively with four year colleges and have a key role in educating the masses. The ten million students now at community colleges should be well prepared with an international curriculum.

Community colleges have been in development throughout their history, albeit not focused on the large-scale problems of population or agriculture. They deal with workforce and educational development, and have vast experience in doing more with less. Community colleges have been sustaining themselves without a lot of funds, working closely with business and state government as partners in trade largely through their own entrepreneurial activities. They promote their programs through the governors' offices, and are partners with trading companies.

Community colleges participate in trade missions to different countries, and sell

technical assistance to these countries. They have a strong commitment to the "high tech corridor" -- promoting software and computer technology; and sometimes liaise between countries and companies.

Community colleges provide training to companies to facilitate their work.

While community colleges do not have a long history of involvement in international cooperation, some have gained worldwide experience and provided training to Japanese municipal managers, Colombian teachers, and Russian bankers and insurance agents, to name just a few examples. To supplement their expertise, community colleges partner with universities. Community colleges today have made a commitment to internationalize their campuses, and they embody the core values of global education and issues of diversity. Most campuses are diverse internationally as well, with students from 40-80 countries.

Perhaps there is a similarity between the U.S. Peace Corps and the community colleges. With about 1,200 independently governed community colleges, community colleges are a model of a decentralized institution. They offer the full range of 21st century technical training, and are connected with business and industry. Every Congressional representative has a community college in the district, which provides the colleges with political leverage.

The question of how to start a community

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college is asked in nearly every country visited, which suggests that many countries need this level of technical assistance, or a partner to assist them. The demand to know the U.S. community college model is coming not only from developing countries, but also from countries interested in developing national market-driven, workforce training systems (e.g., newly independent states).

Participation of the States

Many state colleges and universities have developed global linkages without federal funding. An AASCU publication lists these activities. Their mission is mainly instructional and these institutions feel the need to move internationally and develop more linkages. Developing collaborative opportunities has been a recent mission of the State University System in Georgia. *At a recent meeting with state government, business executives, and university presidents (34), the discussion focused on the strengths and weaknesses of the university system to address interactions among government, higher education, and key actors in the business community who are involved with economic development with a global interest. This group will be developing a strategic plan for the state university system through the Council on International Education, which will address ways to become more involved with economic development and global interests.*

The consortium approach should be considered, particularly as the states are involved in international activities and are beginning to look at state colleges and universities, rather than just the university research centers. The consortium in Georgia involves the whole higher education system which represents a rich capacity that can be tapped by USAID as well. There are many models in which several complicated organizational steps can be taken to identify overlapping interests of higher education institutions and USAID. MUCIA (Midwest Universities Consortium for International Activities) is a good example of a successful consortium. In another case, the institutions of the Oregon State University system won a grant for international internships for U.S. students working with business and international agencies overseas. A group that also should be involved in this discussion is the Association of International Education Administrators (AIEA).

Each type of institution can fill a different need. For example, the community colleges and state systems may provide a means to address short-term needs, e.g., training needed today; whereas, research universities can address longer-range issues. The distinction itself between the short-term and the long-term is blurred -- similar to the distinction between basic and applied research. For example, the short-term training provided by community colleges could contribute to an interrelated long-term

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goal. Thus, different types of research and involvement at different stages of development argue for a consortium of institutions representing the whole range of higher education.

The challenge is to figure out how to work together. Five years ago, community colleges and state colleges and universities would not have been at the table for this discussion. The fact that these associations and institutions can come together through the ALO shows that higher education as a community is committed to these issues and to working with USAID.

Participation of Research Universities

The internationalization of higher education curricula will continue its momentum and priority. In a recent survey, 98% of 103 research universities said their clientele would need information from international sources. Some 83% have instituted linkages to respond. *Information and education alliances will be the usual mode of operation within ten years. The private sector is already doing this, even between erstwhile competitors: e.g., Ford and Mazda are working together. These relationships offer many lessons as well as opportunities.* Research universities will continue to participate in U.S. and global development.

The emphasis will be on development

cooperation based upon sustainable relationships with the potential for long-term impact. These relationships will include for the developing countries the capacity to plan, develop, adapt, utilize ideas and to innovate; the competence to conduct programs and activities that meet needs and opportunities and produce high-quality goods and services; and connections with institutions and individuals in other countries to access, share information, ideas, resources, people, etc. Higher education institutions will play greater roles in human resource and institutional development. A number of *trends to note include an emphasis on enhancing the capabilities of higher education institutions to form linkages and alliances; increased involvement with the private sector; increased recognition of the importance of developing countries by private sector partners (e.g., more interest in Viet Nam rather than England); and increased emphasis on developing countries within U.S. university programs.*

Some negative trends to note include decreasing resources for development assistance and increasing competition for them, and the increased politicization of the development dialogue in which organizations influence congressional consideration. In addition, the higher education community needs to smooth out its own differences to be stronger and more united in development efforts.

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Participation in development cooperation has had a significant impact on research universities. In a recent survey of 208 faculty at one research university, 91% had traveled outside the U.S. and 65% had conducted professional activities in another country. Those faculty having had a foreign travel and/or work experience of four months or longer increased the international content of their courses more than those without such an experience. Those with long-term experience strongly perceived that their ability to teach the subject matter of their discipline was increased. An increased ability to fund and conduct research provided further support for participation in an extended overseas activity. In general, faculty with an extended overseas experience perceived either no or a positive impact on salary, tenure and promotion decisions and involvement in professional association activities.

Even for the core university program, there is need to establish strategic alliances and partnerships with other institutions domestically and abroad, since there are not enough resources for one institution alone to provide the top-quality services desired (e.g., access to specialized faculty, better programs, increased information, and broader opportunities for students). A summary of the number of agreements that are in place by 183 research universities indicates that Western Europe dominates by far, as expected with 140 agreements in place. Yet, 130 of the universities have agreements with China, as

well as agreements in place with a number of countries where USAID currently does business. *The university community already has a significant set of relationships that can be built upon for other collaborative development programs.* Also, partnerships and relationships with U.S. and non-U.S. private firms are increasing in number. *Collaboration may present complex management challenges; yet, the private sector trend -- from offshore direct ownership to alliances and networks -- provides a message for us.*

The core university program needs to critically address the relationship with other universities, USAID, and sponsors of research, in terms of the mutual benefits that can result from a partnership. The network concept can encompass the USAID-university-developing country relationship. A second area to focus on in building this network is how to define the intersection and address the respective partners' core programs and yet be mutually beneficial to generate commitment. This will answer questions of why to invest resources to support the relationships.

There is a set of activities that can be done better if we can define the space where USAID, higher education and the private sector intersect. That is, the space (in a Venn diagram) representing USAID's priorities, in which higher education can be involved, both with USAID and separately. Let's ask how

can we bring these interests together. As higher education becomes more of a partner with business, driven by economic influences, the higher education community can maintain its integrity in a "partnership" rather than being seen as "selling-out." Competition within the university community over development resources is destructive. Higher education as a community has to work together if it is interested in maximizing its resources.

The confluence of several conditions is providing renewed impetus to university development cooperation: decreasing resources to USAID, the need for greater emphasis on human and institutional development, demand for access to ideas and information to fuel innovation and enhance competence, universities' increasing emphasis on international matters, and greater academic collaboration with the private sector. A different mind-set and new approaches by USAID and the universities with their partners will be required for effective development cooperation in the coming decade.

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SYNTHESIS OF POLICY ISSUES: PRIORITIES FOR DEVELOPMENT COOPERATION

There are three key policy areas to consider in defining an action agenda for development cooperation between USAID and the higher education community. The following represents a synthesis of the priorities expressed during this Roundtable discussion:

I. *Forge Multidisciplinary and Interdisciplinary Teams*

The complexity of world problems demands an approach that stresses multidisciplinary programs and projects. Confronting the global risks outlined in this Roundtable -- concerning environmental, health, and food security problems and how they interrelate, and means for economic organization, governance, and social justice -- cannot be approached within single disciplines or single sectors. Future progress requires that we work not only as *individuals* in a multidisciplinary manner, but also in interdisciplinary *teams*.

The process of focusing multiple disciplines around problem definition and solution should permeate universities and government agencies and be used to structure action. The example from the International Rice Research Institute is

illustrative. The objective, mandated by the director, was to tackle the problem of raising rice yields, rather than "doing good science" in a variety of disciplines. Institutional decisions built loyalty to broader, action-oriented goals and promoted greater cooperation across sectors, disciplines, and departments.

The role of multidisciplinary approaches to identify and alleviate problems deserves in-depth study and thought. In particular, the benefits, barriers, and structures to facilitate solving complex development problems deserve to be discussed in a roundtable.

II. *Build and Sustain Advanced Human Capacity*

Future development challenges require a capacity in-country or regionally to identify and address technological and other development problems. A systemic approach to the preparation and use of human resources is vital for all countries. Every country needs to ensure that persons with advanced skills are there to teach, to lead and reform institutions, to help solve critical scientific and technical problems, to adapt technologies. These entrepreneurs, scientists and technicians, administrators and academics, and other professionals will become increasingly important catalysts for development.

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A key factor in Asian countries which have been successful in development is commitment to building local human capacity and to identify and find solutions to technical and scientific problems.

Serious consideration should be given to new ways of engaging higher education in work with governments to build commitment to enhancing in-country capacity for scientific problem-solving.

Building advanced capacity will be aided by dramatic changes in the availability of information technology. Worldwide collaboration among scientists, and the sharing of applications for development, will be increasingly possible through Internet and as a result of higher education partnerships and professional networks.

Opportunities for greater international collaboration in those areas where the U.S. has comparative strength deserve more attention: food production and distribution; research and development technology and application; higher education and industry partnership; and higher education as a model of a differentiated system and as a source of graduate expertise and public service.

III. Draw from Existing Higher Education/Business and Industry/Local Government Partnerships

Many of the efforts toward global development occur outside the purview of USAID and this trend will increase. The growing diffuseness of development expertise and the decline of federal support for development assistance make it important to pursue national interests in development through higher education/private sector/community partnerships. Further thought should be given to ways that USAID might tap into development cooperation efforts which it has not planned and initiated.

U.S. community colleges are increasingly international in their outlook. Agents of local economic development, they now participate in trade missions from their states to different countries. They provide training for companies to facilitate their work, help liaise between countries and companies, and assist countries seeking a model for affording mass higher education relevant to local development needs.

Many states are bringing together business executives and presidents of higher education institutions to develop and implement strategic plans for their economies. These inevitably have international scope. They are developing

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similar plans for educating students and the public about their global self-interests and those of the state and nation.

Research-intensive universities have and will continue to work in international development cooperation. The range of interests is wide and many of these efforts involve partnerships with universities abroad and the private sector. The case of one university is illustrative: It has some 50 cooperation agreements with institutions in countries which USAID assists. It merits asking whether additional development benefits could result from examination of the potential overlap of USAID interests with those which universities and their partners are pursuing.

Many of the alliances of community and state colleges and universities with business and industry and local government could and do advance national priorities in development assistance. Creative thought is called for on ways to build on areas of mutual interest.

The higher education community has a special opportunity to inform the public about their "enlightened self-interest" in development cooperation. This process will be aided as the public becomes familiar with the benefits that accrue locally from international efforts of local

colleges and universities, business and industry.

Advances in communication technology are serving to collapse the barriers of time and distance. It is easier to see the daunting problems of nations and regions, and to appreciate the global risks that transcend national borders. There is also greater opportunity to bring international knowledge and expertise to bear through an array of higher education partnerships and networks, in addressing development problems.

With this confluence of risk and opportunity there needs to be increased commitment to forge higher education ties in service to global development. Both USAID and the higher education community need to convey the importance of development cooperation to their respective constituencies. We hope that this Roundtable report will promote discussion and debate about points of common interest, and about ways to better cooperate.

APPENDICES

ASSOCIATION LIAISON OFFICE FOR UNIVERSITY COOPERATION IN DEVELOPMENT

American Council
on Education
American Association
of Community Colleges
American Association
of State Colleges
and Universities
Association of American
Universities
National Association of
Independent Colleges
and Universities
National Association of
State Universities
and Land Grant
Colleges

AGENDA

HIGHER EDUCATION AND GLOBAL DEVELOPMENT: Policy Roundtable #1

December 12, 1995

The Look of Development Cooperation Ten Years Out: What New Roles for the State, Higher Education, Business and Industry, and the Community?

Sponsored with the U.S. Agency for International Development

National Center for Higher Education
One Dupont Circle, N.W., Washington, DC
Conference Center 1B, Room D

- 8:00 - 8:30 Coffee, pastries. Meet participants.
- 8:30 - 8:45 Introductions by participants
- Convening of the Roundtable by the Moderator
- John C. Vaughn
Executive Officer
Association of American Universities
- 8:45 - 9:00 USAID welcome and expectations
- Sally A. Shelton
Assistant Administrator
Bureau for Global Programs, Field Support and Research
U.S. Agency for International Development
- 9:00 - 9:15 Higher education associations' welcome and expectations: "Toward a Vision of Development in the early Twenty-First Century -- Identifying Global Trends, Needs, and Opportunities"
- C. Peter Magrath
President
National Association of State Universities and Land-Grant Colleges
- 9:15 - 10:00 "Agriculture, Environment, and Health: Changing Risks and Opportunities"
Presentation, questions and discussion.
- David Pimentel
Professor, Department of Entomology
Cornell University

10:00 - 10:45 “Economic and Systemic Transitions: Risks and Opportunities”
Presentation, questions and discussion.

Douglas M. Windham
Distinguished Service Professor
University at Albany
State University of New York

10:45 - 11:30 “Addressing Complex Crises: A View from USAID”
Presentation, questions and discussion.

Richard L. McCall
Chief of Staff
Office of the Administrator
U.S. Agency for International Development

11:30 - 12:00 “Information Technology for Global Development: Future Directions
and Opportunities” Presentation and group discussion.

Margee Ensign
Professor and Director
Tulane Center for International Development
Tulane University

12:00 - 1:00 Working lunch - Kellogg Room, Eighth Floor

1:00 - 1:30 “Successful Development Cooperation: Lessons from the Past and
Guidance for the Future” Presentation and group discussion.

Vernon W. Ruttan
Regents Professor, Department of Economics and
Department of Agriculture and Applied Economics
University of Minnesota

1:30 - 2:00 “Internationalization and Global Development Cooperation:
Participation of Community Colleges” Presentation and group
discussion.

Carole Cowan
President
Middlesex Community College (MA)

2:00 - 2:30 “Internationalization and Global Development Cooperation:
Participation of the States” Presentation and group discussion.

Edwin G. Speir, Jr.
President, Georgia College
Chairman, Council on International Education
University System of Georgia

John E. Kerrigan
President
University of Wisconsin - Oshkosh

2:30 - 3:00 “Internationalization and Global Development Cooperation:
Participation of Research Universities” Presentation and group
discussion.

James B. Henson, D.V.M.
Director, International Programs
Washington State University

3:00 - 4:00 Synthesis of Policy Issues to Inform a Future Action Agenda: Priorities
for Development Cooperation

PARTICIPANT LIST - HIGHER EDUCATION
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HIGHER EDUCATION AND GLOBAL DEVELOPMENT:
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Richard Cincotta, Policy and Evaluation
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Economic Growth Center, Bureau for Global
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Bureau for Global Programs

Monica McKnight, Economic Growth
Center, Bureau for Global Programs, Field
Support and Research

Glenn Post, MD, Supervisory
Health/Population Development Officer,
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Ambassador Sally Shelton, Assistant
Administrator, Bureau for Global Programs,
Field Support and Research

Muneera Salem-Murdoch, Office of
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Research, Bureau for Global Programs

Ann Van Dusen, Senior Deputy Assistant
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Bureau for Global Programs

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Center for Human Capacity Development,
Bureau for Global Programs

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