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Can Higher Education Partnerships Teach a Person to Fish?

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Abstract

A pivotal question currently receiving much attention is whether international education cooperation moves developing countries toward greater autonomy or dependency. (See for example the April 2004 edition of the Journal of International Cooperation in Education.) A common theme in the literature describes the paradox of supplying help to self-help efforts. A number of solutions to this paradox have been offered by various authors. This article discusses the paradox and possible solutions, and then proposes that carefully constructed higher education partnerships offer a format that incorporates these solutions. Several South African-U.S. partnership projects are discussed to provide insights into the implementation successful partnerships and to glean lessons learned.

Introduction

Since 1990 a variety of economic, social and political pressures have produced a shift in the agenda of donor countries. Factors that contributed to this shift include budget deficits, growing trade competition, and globalization. Budget deficits necessitated a decrease of public services and created public skepticism about the effectiveness of government. This situation in turn increased demands for more government-wide reforms and accountability (Binnendijk 2000). In the face of tight budgets, all public expenditures come under scrutiny, including development aid. A perception that aid programs were failing to produce desired and measurable economic, social and political outcomes quickly enough has resulted in a scaling-back of aid budgets and pressure on aid agencies to produce "results".

A change by many aid agencies to results-based management and performance measures, and the resulting revisions of aid modalities, has engendered a lively discourse about the effectiveness of aid in development. A paradox widely discussed is the following: if the purpose of development aid is to foster "self-help," how does the donor supply help to a self-help effort without undercutting the goal? (Ellerman 2002) The approach Ellerman uses to help resolve the conundrum is to define unhelpful help:

> One form of unhelpful help both in education and in development assistance is the controlling or social engineering form of assistance. The helper has the answers or solutions and has various ways to cajole compliance on the part of the doers to these "new ways" of doing things. Then the helper has the ownership of the process, not the doers. Compliance is perfunctory and ineffective, and the doers have still not learned

to find their own answers. (Ellerman 2004, p. 5)

The accountability push on development aid agencies has forced them to seek more control of projects to secure desired measurable results. The more an agency takes control, the less critical thinking and creativity is required by the developing country, further diminishing that country's ability to help itself, and undercutting its ownership of the project. There is a shift from helping the developing country develop process skills by which it can help itself to producing results such as 'number of teachers trained' for annual reports to the donor agencies' governments. Or as Ellerman states: "Instead of helping people learn how to fish for themselves, the task managers need to show that they have "given out a certain number of fish" or even better that they have helped set up a "fish distribution system." (Ellerman 2004, p. 6) The Development Assistance Committee cautioned in 2000 that results based management "may lead to a concentration on those types of activities that are most easily measured rather than what's most important" (Binnendijk 2000, p. 24).

In efforts to give developing countries more ownership and control of their own national agenda, aid agencies have adopted new aid modalities such as sector-wide approaches and direct budget support. Giving budget support, however, assumes that the recipient nation has the capacity to know how to use the financial resources effectively. Yet administrative capacity in planning and implementation is problematic in some of the lesser developed countries and "the sheer complexity of what is now involved, both for the donors and the recipients, in these new models means that the donors are dramatically more central to the implementation of these new modalities than they were in the older project approaches" (King 2004, p. 92). King argues that with a substantial number of developing countries receiving major shares of their recurrent budgets from outside sources, the new aid modalities, instead of putting recipient countries in the driver's seat, increase the dependency of developing countries on foreign aid and create new "welfare states". Another issue in the aid discussion is that of what determines the "best" solution to a development issue. What constitutes an improvement or a "best" approach for improvement is colored by economics, logistics, politics, religion, and culture. It is highly subjective and is influenced by the perspectives, values, and interests of different stakeholders (Assie-Lumumba 2004). Furthermore, there cannot be a "one-size fits all" solution to development problems.

The philosophy of "how to help" is a complicated issue that is approached differently by different donor countries. Western countries "tend to have confidence in their knowledge and to apply what they believe developing countries need" (Sawamura 2004, p. 33). They try "to transplant a 'best practice' backed up by conditionalities on policy-based lending or aid to motivate the country to implement the best-practice recipes. Yet, this policy reform process is designed to promote neither active learning nor lasting institutional change. It will undermine people's incentives to develop their own capacities and weaken their confidence in using their own intelligence." (Ellerman 2004, p. 12) The Japanese philosophy is "characterized by knowledge sharing in order to create local knowledge" (Sawamura 2002, p. 343). Rooted in Japan's own history and tradition, this aid philosophy places a

strong emphasis on respecting the recipient's own values and needs (Ministry of Foreign Affairs, Japan 1991, pp. 80-81), but it also requires self-reliance by the recipient country. This philosophy is less likely to produce sustainable results in developing counties that do not have a tradition of self-reliance or administrative capacity.

A number of solutions to the self-help paradox have been proposed by the authors of the 2004 Special Edition of this journal. Ellerman proposes that the way to respect the autonomy of the developing nations is to focus on embryonic projects. He quotes Schumacher:

> The first task is to study what people are already doing...and to help them do it better... The second task is to study what people need and to investigate the possibility of helping them to cover more of their needs out of their own productive efforts. (Schumacher 1997, p. 125)

Ellerman warns that projects should not be initiated by the development agency. They should "look for positive changes starting to take place in the underlying institutions ... and then provide development incentives ... to strengthen those pre-existing tendencies (Ellerman 2004, pp. 11-12). Such projects are more likely to succeed because they address an existing pressure that someone is trying to relieve and are locally owned. This type of development approach might be called "just-in-time aid."

Nagao (2004) offers an experience-sharing model of technical cooperation. The model requires symmetry of relations between the supplier and recipient. The donor may supply a best 'experience', which will be shared if the recipient finds it attractive. Thus the recipient country retains ownership of the project. Both the learner and the supplier jointly define the project, and in order to learn the best way to transfer knowledge and facilitate learning, the supplier needs to gain knowledge about the needs and particular environment of the recipient's country. This learning-centered model builds capacity of both the supplier and recipient. There is a focus on the learning process itself with the recipient playing a major role in the evaluation of what learning has taken place. The model should be adapted to allow for cultural differences.

Assie-Lumumba (2004) argues that innovation rooted in a holistic approach is the best way to develop 'home-grown' solutions (i.e. self-help) to real-life development issues. She argues that the most effective way to achieve innovations is "to create the conditions in the learning system to foster innovative minds." Higher education plays a crucial role in exposing people to a spectrum of different knowledge bases from which they can draw in creating an innovative solution to a problem. Even if the solution to a problem is conceived by a donor country, an innovative mind will be able to modify and adapt it to fit the needs and conditions of the home country.

The purpose of this paper is to explore how higher education partnerships can serve as a model to helping developing countries help themselves without increasing their dependency. Several collaborative projects will be presented as examples.

Higher Education Partnerships

The literature on the paradox of helping self-help and international aid, foregrounds several guiding principles.

1) Development is more sustainable if assistance addresses a real-life problem that someone is already trying to solve.
2) There should be real collaboration between the 'giver' and the 'recipient.' The exchange should go both ways. Solutions to development problems should be developed jointly.
3) Developing countries should take ownership of development efforts so they do not become dependent on the donor country.
4) Education, especially higher education, rooted in a holistic, integrative approach, creates innovative minds that can provide innovative solutions to real-life developmental issues.
5) Learning-centered projects designed to develop capacity should focus on the learning process.
6) The cultural differences should always be considered and respected.

Higher education partnerships are ideally suited to embody all of these points if the Requests for Proposals are carefully designed and implemented and if Progress Reports request pertinent information.

Addressing Real-Life Problems

There are several ways to assure that higher education projects address real-life problems. First, the Request for Proposals can require a needs assessment and request a description of what the developing country and/or institution in the developing country is already doing to solve this problem. This information shows the commitment of the 'recipient' to solving the problem and helps the partners jointly plan a project that adds to, without duplicating, progress already being made. A Request for Proposals can also address a particular known problem in a region or specific country such as basic education projects in Sub-Saharan Africa.

Collaboration

Two-way collaboration means that each educational institution is both a donor and a recipient. By requiring that the partners show how each will benefit from the partnership, the project avoids a situation where the partner from the developing country is 'dependent' on the giver. Collaboration creates an atmosphere where partners jointly solve problems. They take ownership and therefore the results of the project are more sustainable. There are many ways that the institution from the donor country can benefit from a development project. Some of these are joint research, joint curriculum development, professor and student exchanges, projects for a professor's students, online courses taught by a professor in the other institution, lectures or presentations by the professors from the developing country,

and internships.

Taking Ownership

The partner from the developing country should help in the design and implementation of the innovation/intervention. This person should be a Project Director along with the lead person from the donor country. They should be colleagues. Each partner should have explicit management responsibilities that are carefully detailed in the proposal. There should be institutional support from both partner's institutions, but particularly that of the partner from the developing country.

Developing Innovative Minds

A Request for Proposals can stipulate that the proposal demonstrate how a project will increase human capacity. Examples include joint curriculum development, train-the-trainer programs, seminars or workshops on pedagogy, content area courses, workshops or seminars, and thesis or dissertation advising. Evaluation and progress reports should include assessments of how capacity has been affected.

Learning-Centered Projects

While it is important to indicate how many people have been trained, the number of women or girls trained, etc., these do not indicate that learning has occurred. It is important to assess learning itself. Pre- and post-tests are one option, but interviews, essays, journals, laboratory reports or tasks, etc. are other possibilities depending on the type of learning under consideration.

The Culture Factor

Differences in culture should be considered in the development of the project. Partners often begin a project without being fully informed about each other's cultures. Lack of pertinent information can cause unintentional friction later, so it is useful for partners to spend time together before or early on in the project. Periodic reports to the funding agency might include questions on what cultural differences the partners discovered about each other and how these differences were accommodated in the project. It might ask if any unforeseen problems or outcomes occurred as a result of cultural differences.

Examples of Higher Education Collaborations

Prince George's Community College (PGCC) in Maryland, USA has received three South Africa partnership grants funded by USAID through the Association Liaison Office for University Cooperation in Development and a cooperative agreement funded by USAID South Africa. They are all different but it is useful to look at them to determine how well they incorporated the above 'solutions' for the self-help paradox and to gain insights from lessons learned.

The Net\Work Project (January 1999-December 2000)

The Net\Work Project was developed on the telephone by the PGCC team and Vice-Chancellor of Vista University in South Africa. Initially the discussion centered on the similarities between Vista and PGCC: the majority of students coming from disadvantaged backgrounds, the number of students, and the need to reach students at different locations. The conversation then focused on complementarities, Vista's needs, and PGCC's strengths. Vista, comprising seven campuses in three provinces, many situated in townships, was having difficultly finding enough computer science teachers to cover all of its computer courses. PGCC, an early leader in distance education, had been involved in a distance education component of a USAID-funded project in Poland. After discussing a variety of options, it was decided that distance learning offered possibilities for enhanced workforce training as well as a strategy to address Vista's problems with staff shortages and a widely dispersed student body. For Vista, where correspondence courses were the only distance learning strategy, the learning curve for instructors could be shortened considerably by initially using materials prepared in the U.S. and by having teachers serve as mentors. However, the learner-centered culture of many Internet-based, and, in particular, web-based courses was a major change for the teacher-centered culture in South Africa and much of the world. Hence, to successfully introduce web-based courses at Vista, more than software, content and technical support was required. It was necessary to foster a new approach to the process of teaching, demonstrate the value of student-centered active learning, and then show how new technologies can help achieve the objectives of that pedagogy. The Net\Work project developed a three-pronged approach to addressing Vista's needs using experts in computer education, distance learning strategies and technology, and appropriate educational pedagogy.

1. American distance education experts would travel to Pretoria, South Africa and conduct a week-long workshop, familiarizing the South Africans with various modalities of distance education, as well as pedagogical issues inherent in using these modalities. There would be active learning components to the training. Later one professor would return to South Africa to conduct a one-week hands-on course on how to use a web-based platform in developing and teaching online courses.
2. PGCC would provide course content, using various modes of distance learning, for a computer literacy course and an Internet literacy course and provide the training to use the media. Vista would then pilot a distance learning Computer Literacy Course and an online Internet Literacy course. This was a typical train-the-trainer project.
3. Africare, an NGO based in Washington, D.C., would find internships for students in the Computer Science Department at Vista.

By the time the project was funded, a new Assistant Vice-Chancellor at Vista had been appointed. He replaced the head of the Computer Science Department, with someone who was not interested in the project. While institutional leadership is important in getting a

project blessed, without a committed person who will actually be doing the day-to-day follow through, the project may be doomed. Fortunately the Head of Department did arrange for the first workshop through which a new Project Manager was found.

When the project team first traveled to South Africa, there were naïve visions of students using computers and taking computer literacy courses on campus or at community centers. When the team began demonstrating different modalities of distance education, however, they quickly learned the facts of life about many Third World countries. Many areas do not have electricity. Many of the computers donated to Vista were either not Internet accessible or were soon stolen. Furthermore, even where there was Internet connectivity, it was often very slow. The instructors at the workshop especially liked the concept of audiotapes as almost all university students had cassette players. The students would be able, with the tapes and a manual, to work on computers that did not have Internet connectivity. One Vista instructor volunteered to develop the tapes and the manual, and to oversee implementation of the new computer literacy course in a distance learning format. This instructor became the new South African Project Manager, and PGCC's partner and Project Director in subsequent projects. The new course, which included a 2-week practicum, was first implemented in January 2000 to 210 students. Of the 156 students who took the final exam, 94 were female. The students scored higher on the exam than the face-to-face students. The project motto became "Low tech is better than no tech, and in developing countries, is often better than high tech!" The course was offered again in 2001 to 350 students and enrollment continued to grow every semester.

The second training workshop took place in October 1999. The objective was to teach the participants how to teach a web-based course using an online Internet Literacy course housed on a server in the U.S. Unfortunately, when the U.S. instructor arrived at the lab in Pretoria, there were problems of connectivity, low bandwidth and blocked access. The lab computers could not connect to the server in the U.S. So the faculty members were, instead, taught to develop a web page. They later took the online Internet Literacy course through PGCC on their home or other computers that could access the servers in the U.S. Of the 25 faculty members who started the course, 15 received A's, while five did not complete it.

One additional result of the project was the placement of eight students as interns in local companies. Two of these placements turned into full-time jobs for the students.

The ComCo Sustainability Project (January 2000-July 2002)

The ComCo concept was jointly developed by the Net\Work partners. During the Net\Work project an analysis of Vista's computer needs revealed that at the Bloemfontein campus, a mid-sized campus, each student had, on average, only one-half hour of lab accessibility per week outside of class. The computer shortage had since been exacerbated because the computer literacy course became a required course for most degrees offered at Vista and also because the new Distance Learning version of the Computer Literacy course required students to do a practicum on campus. The number of students required to take computer classes quickly outstripped Vista's capacity. Because Vista mainly served an

economically disadvantaged group, most students could not afford their own computers and had to depend on using campus computers for practicing skills. Another problem was Vista's Internet connectivity, download time, and lack of bandwidth.

The partners searched for a way to raise additional funds for Vista to purchase technology. They determined that by providing computer training for school teachers at low fees, funds could be raised and they could simultaneously address another critical problem in South Africa - its extraordinary school drop-out rate, particularly in the black schools. Increasing the computer skills of public school teachers would enable them to employ the computer in their classrooms and promote the computer literacy of South Africa's youth. The ability to learn skills that were marketable might encourage students to remain in school. The plan was to provide training on each of the seven campuses for 8 hours a week for 3 weeks. The cycle was to be repeated 6 times. A minimum of 840 teachers would be trained. The teachers would be taught word processing, spreadsheets, Windows, Internet and e-mail skills with a focus on using these packages in the classroom and for class management. Several problems changed the program. First, there were personnel and physical facility problems in the 8-hour per week, 3-week plan. It was decided to offer the courses on the weekends and in the evenings for 10 weeks instead. Multiple sections were run on some campuses simultaneously because of the overwhelming demand. Also, the course was restricted to Word, Excel, and Windows because some of the campuses did not have enough computers connected to the Internet. Lastly, one of the campuses had its 15 computers stolen, so classes were only offered on six campuses. A lecturer was hired for each section and there were one or two student assistants per section, depending on the size of the computer laboratory. Originally the price of the course was set at R150 or approximately $15. Comparable training received through a commercial firm was R2400. In the first training there were 486 students, and 839 teachers showed up for the second cycle. Between the first two cycles, there were 1325 students-well over the projected enrollment for the whole project with less than half the time completed. All of the pre-printed manuals had been distributed with more needed. All of the funding for lecturers and assistants was committed. One of the purposes of the project was to raise money to purchase technology for Vista, but much of the income from first training had to be used instead to print new manuals and hire more lecturers and assistants. Thus, it was decided to raise the registration fee to R300 to reduce the demand and the frustrations of students who could not get into sections. This would also produce the funds to run the training since grant funds had been depleted. At this higher, but still very reasonable fee, the course would be sustainable and there would be some extra funds for technology. The training continued beyond the end of funding until Vista University was dismantled in 2003 due to a higher education restructuring in South Africa.

The partners also sought to provide benefits to the Net\Work partners in the U.S. by developing a History of South Africa course to be taught online by a Vista professor to students at community colleges in Maryland. The course would give U.S. students, particularly those at PGCC, an understanding of South African history from the vantage point of someone who lives there. An additional benefit to this part of the project was that Vista would develop

its own online expertise which could be used to train additional instructors at Vista. Seventeen students enrolled in the course in 2001 from three Maryland community colleges.

Technology Enhancement Grant

The long-term objective of the technology enhancement to ComCo was to create an 'open lab' on each of the seven Vista campuses. The technology enhancement contract only provided one lab of 28 computers on one campus. It also purchased and installed a new server that improved Vista's connectivity issues. A member of the IT department was trained in Microsoft Certified Systems Engineer to help keep computers up and running on campus.

The Leadership Institute for South African Secondary Education (LISASE)

LISASE is a three-year project aimed at addressing problems of capacity and quality in mathematics, science, and computer studies in the FET (high school) sector in South Africa. PGCC was competitively awarded a co-operative agreement by USAID/SA to provide short-term training opportunities for 176 South African teachers, school administrators and Department of Education officials in the U.S. over a three-year period. One-third of the participants are to travel to the U.S. each year for 10 1/2 weeks of training that would focus on:

- teaching skills and strategies,
- advanced curriculum development methods and assessment,
- educational management expertise, and
- materials development knowledge

as applied in the U.S. in high schools, community colleges, and state education departments. Experience takes the form of job shadowing, on-the-job training, student-teaching type experiences and institutes and workshops. The participants are from the 102 Dinaledi schools, schools participating in an urban renewal project from two targeted townships outside Welkom and Kimberley, and the provincial and national Departments of Education.

Partners include Garrett Community College, the College of Southern Maryland, the University of Maryland College Park's Center for Teaching Excellence, Capitol College, the Maryland State Department of Education (MSDE), Prince George's Workforce Services Corporation, Prince George's County Board of Education, Anne Arundel County Board of Education, Charles County Board of Education, Garrett County Board of Education, Montgomery Blair High School, DeMatha High School, and WorldWise. The South African National Department of Education is also involved, as is USAID/SA.

Each cycle of the project begins with an orientation and some technology training to teach participants how to use email, the Internet, and basic Word. The teachers then are divided into groups and participate in a student-teaching type experience at a number of Maryland high schools. Each teacher is placed with a mentor teacher for three weeks. It is hoped that by having the visiting teachers in the schools for an extended period, they will become acclimated to classroom technology and new learning strategies and will be more apt to try them in their own classes when they return to South Africa than if they just visited

the schools. During this time period principals are also in high schools shadowing their counterparts and Department of Education officials are in training at MSDE. After these experiences, all the South Africans are brought together for a focus group meeting to debrief the participants and allow them reflect on differences between U.S. and South African Schools and to discuss what they might want to change in their classes back home.

Following the focus group, participants attend a variety of workshops including advanced technology, pedagogy, and using the graphing calculator. The teachers and subject advisors then attend content area institutes. In 2003, a Mathematics Institute using NASA data and simulations trained mathematics teachers in advanced uses of graphing calculators as well as some robotics. In 2004, a Technology Institute at Capitol College trained Computer Studies teachers in A+ and Network Plus. A Chemistry Institute at Garrett College trained physical science teachers on how to use a graphing calculator and probe to teach chemistry and then teachers attended a Discovery Science Chemistry Institute at Prince George's Community College. A Physics Institute and another Mathematics Institute are scheduled for 2005. While teachers attend institutes, principals and Department of Education officials attend other workshops on such topics as planning, school to work programs, and connecting to the local economy. They see additional types of technology such as interactive TV and go to the World Bank for a session on development. The last week is a Leadership Institute conducted by the University of Maryland. Participants discuss advanced curriculum development and assessment. They divide into groups by province and develop implementation plans for their return to South Africa.

This is a highly complex project with many moving parts. It is a logistical nightmare for the PGCC staff. However, the training itself has been top notch. The participants, particularly the first group, constantly complained that more time should be spent on each topic. They were like sponges. They paid extra money out of their own pockets to travel back to one of the colleges at the other end of the State to get additional training on weekends.

There were some problems with the second group. First, some of the provinces gave their participants large amounts of money to purchase technology while in the U.S. Others gave their participants nothing. The disparity in treatment caused problems throughout the training cycle. Participants were constantly concerned that they were not being treated equally. Eventually the project administrators were afraid to do anything for anyone lest they be accused of favoritism. A second problem was that some of the provinces sent participants who did not meet the qualifications requested or individuals who were not serious about learning. While the South African Project Manager (the partner from the three previous grants) specifically requested computer studies teachers (i.e., individuals with some experience teaching computer studies courses) for the A+/Networks + training institute, some of the provinces sent over auto mechanics teachers, a bible studies teacher, and a 7^{th}-8^{th} grade English teacher. Some of the Department of Education officials were not high school level administrators, but elementary and middle school level. Some of the teachers and principals planned to retire shortly after their return to South Africa. Others simply wanted to shop and sight-see. The Request for Proposals had specifically stated that PGCC and its

partners would select the participants, but on the first trip to South Africa following funding notification, the Project Director was informed by an individual from the National Department of Education that the provinces had to select the participants. After the problems with the second group, at the recommendation of a representative of the South African Ministry of Education who joined the group for the last month, changes were made in the selection procedure. The provinces had to recommend 2.5 candidates for each position, competency exams were given, and USAID and PGCC representatives interviewed all candidates.

There is no money in the cooperative agreement for follow-up activities in South Africa to assess how the U.S. experience has affected teaching and learning in South Africa. However, some of the provinces have been utilizing the participants as workshop leaders to teach other teachers what they have learned. Some of the returning teachers have been doing this individually. So while the U.S. experience will end when funding ends, sustainability will occur to the extent that the participants become educational leaders in South Africa, training other teachers, and using their new knowledge in their classrooms.

The LISASE project involves collaborations with other higher education institutions, but only those in the U.S. The project was not jointly developed with the South Africans. It was a response to a Request for Proposals requesting training in the U.S. It will be useful to look at the differences between LISASE and the higher education collaborations to get some insights on how much the incorporation of the guiding principals for solving the self-help paradox affected the success and sustainability of each aid intervention.

Lessons Learned from the Higher Education Collaborations

Addressing Real-Life Problems

All of the projects dealt with addressing real-life problems. For the Net\Work project it was a shortage of computer instructors; for ComCo it was a shortage of computers and the low completion rate in South African high schools. The Technology Supplement again addressed the lack of computers. LISASE was designed to impact the capacity and quality in the FET sector so that students who graduate can find jobs and contribute to the economic growth and development of South Africa. These were all embryonic projects. The shortage of computer instructors and of computers were real pressure points. Trying to solve the problem of getting more computers moved the partners to developing a training program, which then addressed another problem; so one thing leads to another. Some of the teachers learning to use the computers probably returned to their schools with requests for computers in their classrooms, which would create a new pressure point-all of this leading to positive, sustainable changes in education.

Collaboration

Collaboration in the development of the project occurred to some extent in the Net\Work project. When the collaborator, the Assistant Vice Chancellor, changed, however, the benefits of that collaboration were lost until a new person who was committed to the

project was found. The ComCo Project was an example of real collaboration. The developing country partner was looking for the solution to a problem-lack of computers. The partners together developed the solution. The partners then also sought to find a benefit for the donor country's institution-the History of South Africa course. In this project both countries were donors and recipients. This kind of collaboration could not have happened without certain ingredients:

- The partners must decide on the projects jointly considering each other's institutional needs and capacity.
- The project must have the right partners. The partners should be individuals who both have a real commitment to the project and not just have been assigned to it. Projects almost always require more time than originally planned and a partner who does not have that level of commitment will not have the patience, and sometimes, unrelenting drive, to get things done.
- The partners, just as with any other true partnership, need to trust and respect each other, their opinions, their constraints, and their needs. They need to communicate openly and regularly. Making time for partners to be together in enjoyable situations helps establish this kind of relationship.

LISASE might best be described as entailing more cooperation than collaboration. It is more one-sided. PGCC produced a project based on what the funding agency wanted and then teaches best practices to the participants. The participants may or may not take ownership of those practices. This is similar to most projects run by NGO's. Universities are involved in partnerships because they believe they get something from the partnership, be it internationalizing the curriculum or something else. The fact that both partners are getting something from the project means they both take ownership of it. Developing countries gain self-esteem because they are giving as well as receiving and are less likely to become more dependent.

Taking Ownership

In the higher education partnerships, the partners from the developing country did take ownership. They developed the distance learning computer literacy course. They set up, staffed and ran the ComCo training. This was not the case in LISASE which was not co-developed. However, if the participants return to South Africa, teach others, adapt some of what they have learned to develop new modules using acquired knowledge and skills, then they will take ownership. It will be up to the provincial governments to create an environment where this process will occur. In order for the developing country to take ownership, there has to be an individual who is ready and willing to be an agent of change. This is much easier to do with a partnership of peers both interested in solving a pressing problem and jointly developing the project.

Developing Innovative Minds

Net\Work, ComCo and LISASE all use active learning strategies and thereby create a learning environment that fosters innovative minds. The Chemistry Institute, in particular, using discovery learning pedagogy, allowed the participants to construct their own knowledge. The province of KwaZulu-Natal in South Africa hosted a week-long workshop during which past LISASE science teacher participants ran sessions on discovery learning. So this pedagogy is being disseminated to other teachers in South Africa.

Where is the best learning environment for a particular type of educational or training project? Should it be in the donor country or in the recipient country? The South African projects have used both approaches. Cost, of course, is an issue. Training is usually more expensive in the developed country especially if few trainers are needed and many are to be trained. One benefit of training in the donor country is that trainees will more likely assimilate the training subject if they see it in constant use there. For instance, if a trainee is at a school in the U.S. and sees teachers in all the classes use active learning strategies every day, that trainee will more likely assimilate the practice and use it in his/her own class on returning home. Another benefit is that more resources can be brought into the training activities in the developed country. Training in the donor country also has advantages in that the participants learn what the country and its people are really like through first hand experience. However, if the wrong people are sent to the developed country, it is a larger waste of money than if the training occurred in the developing country. For each person without the proper educational background who was sent to the U.S. in LISASE, about $10,000 was wasted. Furthermore, there is also the issue of what to do after training hours for people in a strange country. It is difficult to be responsible for a large group of trainees 24 hours a day for 10 ½ weeks.

Sending more people to the donor country for a shorter period of time may be better than sending a few for a longer period. If individuals from a developing country get a lot of training or go to school in the developed country, when they return home, they may find they can earn more money in another job and leave their institution when they return. Thus the home institution does not get the benefit of their training. This was the case in another PGCC project in Rwanda. Individuals were trained in the U.S. to run the computer lab for the National University of Rwanda (NUR). However, when they returned to Rwanda they left their jobs at the NUR to earn more money in industry. Improving computer access for NUR students was a major goal of that project, so the departure of these trainees has adversely impacted the ability of the NUR to run computer labs affecting thousands of students.

Learning-Centered Projects

Discovery science methodology is concerned with the process of learning, as are all active-learning strategies. Discovery Learning is based on the constructivist theory. Students are given a problem to solve, and a methodology. They then construct their own knowledge by working on the problem and discussing what they have found. As mentioned above, active learning strategies were incorporated into Net\Work, ComCo, and LISASE. The

projects also used assessments to make sure that learning was taking place.

The Culture Factor

Understanding each other's culture helps with collaboration and project success. Several examples can illustrate this. PGCC also has a Rwanda higher education partnership project. The trainers from the U.S. fit their training in Rwanda around the College's teaching schedule. Often training occurred in late January or mid-March because those are times the American teachers have a break from teaching. At some point in time, the Americans began to sense the Rwandans being upset because the Americans were traveling to Rwanda for only a couple of weeks at a time. The Americans explained that this was because of their teaching schedules, but that explanation did not seem to settle the issue. It turns out that the Rwandan professors are required to teach a certain number of hours each year and they arrange those hours with their students. Thus, they can leave the country for a month to work on a project. They did not understand that the Americans did not have this flexibility and had to teach at regularly scheduled times.

Another example is that in many countries in Africa, people have a different concept of time. They do not arrive at meeting at the scheduled time. The LISASE orientation always includes an explanation of how punctual Americans are and that if one is consistently late, this is taken to mean that the person is disrespectful of the other's time or does not value what he has to say. In addition, knowing holiday dates in each other's country is important so that training is not scheduled on one of them.

Several people from each country involved in the project should travel to the other country to learn more about the partner's country and culture and develop a deeper relationship with that individual. Visiting another country and working with its people leads to change in a person. The person brings back information and attitudes to their institution, students and community. Students have been spellbound when their teachers talk about the genocide in Rwanda, or the poverty in a developing country. The differences are not "good" or "bad." Rather, they are seed for thought. Each traveler gains insights into what we have in common, how we are different, and which things are important. Involving a larger number of people, even for a shorter period of time, can lead to tremendous change in the attitudes of the people involved and can influence those they work with or teach.

Conclusions

This paper initially posed the question, "Can higher education partnerships teach a person how to fish?" The problem today with many attempts to help self-help is that calls for accountability undercut the goal. Some guiding principals have been offered in the literature to circumvent the self-help conundrum. The higher education partnership model has the potential to achieve some of the best results in helping self-help because the nature of higher education partnerships more easily aligns with these guiding principles. The peer relationship of the partners, the fostering of interest in cultural exchange, and the environment

that nurtures innovative minds all contribute to the success of these partnerships. Aid agencies might want to take a closer look at the more successful of these partnerships and, with the use of well-designed RFP's that emphasize the guiding principals, expand these mechanisms of aid to take advantage of these characteristics.

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